SUMMARY OF LECTURES

GIVEN AT THE

WINTER SCHOOL

AT

Bedford College for Women, University of London

29th December, 1947 — 10th January, 1948

Organised by the

WOMEN PUBLIC HEALTH OFFICERS' ASSOCIATION

7, VICTORIA STREET, LONDON, S.W.1

PRICE FIVE SHILLINGS AND THREEPENCE

MESSAGE FROM THE PRINCESS ELIZABETH TO THE STUDENTS OF THE WINTER SCHOOL

Buckingham Palace.

"I SEND my best wishes to the Health Visitors and School Nurses assembled at Bedford College for the Winter School. Your work is of real importance to the future of our Country, and I am certain that your devoted service to the welfare of the mothers and children will remain at its present high level. I hope that the fortnight you spend at Bedford College will be of the greatest value to each one of you.

ELIZABETH."

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"HEALTH TRIUMPHANT"

Inaugural Lecture: "Child Health in Britain."

PROFESSOR ALAN MONCRIEFF, M.D., F.R.C.P., Nuffield Professor of Child Health, Director, Institute of Child Health, University of London.

A. THE MEANING OF HEALTH.

"Physical Fitness of the Individual."

JOHN D. KERSHAW, M.D., B.S., D.P.H., Medical Officer of Health and School Medical Officer, Borough of Colchester.

"Mental Fitness."

MISS DORIS M. ODLUM, M.A., M.R.C.S., L.R.C.P., D.P.M., Senior Hon. Psychiatrist, Elizabeth Garrett Anderson Hospital, London; Hon. Psychotherapist to the West End Hospital for Nervous Diseases, London.

"Marital Fitness."

REGINALD PESTELL, Dip. Econ., J.P., Secretary, London Marriage Guidance Council.

"Social Fitness."

MRS. ETHEL DUKES, L.R.C.P., L.R.C.S., Medical Secretary, London Marriage Guidance Centre.

"Maternity Fitness—Care of the Mother." (Illustrated.)

J. LYLE CAMERON, M.D., F.R.C.S., F.A.C.S., F.R.C.O.G., Senior Gynæcologist and Surgeon, Royal Waterloo Hospital.

"Food and Health."

MISS ELIZABETH MASON, B.Sc., M.A., formerly Senior Dietitian to the Ministry of Food.

B. THE AIMS OF HEALTH.

"Feeding of the Normal Infant."

MRS. MURIEL RADFORD, M.B., B.S., Lond., D.P.H., Medical Officer to Battersea, Bethnal Green, Chelsea and Lambeth Borough Councils.

"The Contented Baby."

PROFESSOR J. A. HADFIELD, M.A., Oxon., M.B., Ch.B., Ed., Lecturer in Mental Hygiene at the University of London.

"The Sturdy Toddler."

MRS. EDNA BALINT, B.Sc., Psycho-analyst.

" Remedial Exercises for Children."

MRS. ESTRID DANE, Head of the Neuman-Neurode Training Centre for Active Exercises for Infants and Toddlers.

" Some Factors Producing Delinquency."

MISS BARBARA LOW, B.A., Official Lecturer for, and on the Staff of, the Institute for the Scientific Treatment of Delinquency.

" The Social and Anti-Social School Child."

J. D. W. PEARCE, M.A., M.D., F.R.C.P.E., D.P.M., Honorary Psychiatrist, Queen Elizabeth Hospital for Children; Co-Director, Institute for the Scientific Treatment of Delinquency.

" A Healthy Old Age."

The Right Hon. LORD AMULREE, M.D., F.R.C.P.

C. THE FUTURE OF HEALTH.

" Co-education in Relation to the Teaching of Health."

" The Art of Teaching."

PROFESSOR J. W. TIBBLE, M.A., M. Ed., Department of Education, University College, Leicester.

" Tuberculosis and the British Community."

C. H. C. TOUSSAINT, M.R.C.S., L.R.C.P., D.P.H., Physician to the Willesden Chest Clinic, Middlesex County Council.

" Adoption."

D. H. GEFFEN, M.D., D.P.H., Medical Officer of Health, Metropolitan Borough of Saint Pancras.

" The Borstal System of To-day."

H. G. REEVE, Governor, H.M. Borstal Reception Centre, Richmond.

" The Future of the Adolescent."

CHARLES F. STRONG, M.A., Ph.D., Borough Education Officer, Tottenham.

" Sub-Fertility."

MISS M. MOORE WHITE, (Mrs. Page), M.D., F.R.C.S., M.R.C.O.G., Gynæcologist and Consultant, E.M.S. Three Counties Emergency Hospital and Lister Hospital, Hitchin; Chief Assistant, Fertility Department, Royal Free Hospital.

" Endocrinology."

RAYMOND GREENE, M.A., D.M., M.R.C.P., Physician, Royal Northern Hospital and Metropolitan Hospital.

" Future Trends of Local Government."

F. L. EDWARDS, O.B.E., M.A., (Oxon.), Barrister-at-Law, Assistant Secretary in the Ministry of Health.

Concluding Lecture: " Education in Germany."

MRS. EVA M. HUBBACK, M.A., L.C.C., Principal, Morley College for Working Men and Women, London.

Inaugural Lecture

CHILD HEALTH IN BRITAIN

By Prof. ALAN MONCREIFF

Nuffield Professor of Child Health; Director Institute of Child Health, University of London

THE Professor opened his lecture by saying that we had come to an exciting time in the field of children's social medicine. A time when one sees infantile mortality figures dropping and improved facilities for investigation and treatment at children's hospitals.

Despite this progress, however, the war years brought shocks. Firstly, during evacuation, it was found that 10 per cent of our children were either "dirty" or "bed-wetters." Secondly, during these years statistics were studied and analysed, and although it was found that the overall infantile mortality figures were down by half in the last forty years, the decrease was not equal in all grades of the social scale.

On dividing the children of this country into five social grades, it was seen that in the first or highest grade, the "non-child welfare attending community," the figures were down by more than half. In the fifth or lowest grade, however, the health of the child attending the Child Welfare Centre is not so greatly improved as had been thought. Thirdly, the neo-natal rate has not dropped in proportion to the drop in later months of infancy.

In 1919 there were six hundred authorities in the country which had set up Child Welfare Centres. The Medical Officers appointed may or may not have had Diplomas in Public Health, but few had any special training in Child Health. The Health Visitors, likewise, had not necessarily received any special training in the child health field, and the School Medical Service was no better off, for, prior to the Rushcliffe Report, School Nurses had no special qualifications. Of all Medical Officers in Infant Welfare and School Medical Services, less than 10 per cent had held resident appointments in a children's hospital, and, at this time, qualifications in Pediatrics were difficult to procure, as it did not constitute part of the Final Examination for Medical Students.

The turning-point in the Child Welfare Service came in 1941, with more collaboration between hospitals and local authorities, which is necessary for the best results.

The definition of Child Health is very difficult. The work of the Health Services is preventative, but the ill child must be studied first to find the cause, before preventive medicine is possible. When Pediatrics are included in the Final Medical Examination, as is the case in Glasgow, a great step forward will have been taken, as Medical Officers will then have more experience of the diseased child.

Great strides have been made with new drugs, etc., but problems, simple and elementary, e.g., nits in the hair or the diagnosis and treatment of threadworms, are exceedingly important from a child health point of view.

Other problems to be faced are:

1. NEO-NATAL MORTALITY.

2. DIET AND NUTRITION. Owing to war-time conditions, great advances have been made; there have been fewer hungry children, as things have been levelled out, but there is also a need for some implementations, e.g., a safe milk supply with universal pasteurisation.

3. PHYSIOTHERAPY could have a sounder and more scientific foundation and be used more in the rehabilitation of the sick.

4. TUBERCULOSIS IN CHILDHOOD. The increased incidence in war time has constituted a major problem.

5. CHILD GUIDANCE. Another major subject, which should not be too much in the hands of Education Authorities.

The Future in the Public Health Field

It is recommended that Maternity and Child Welfare should be split, with Pediatrics on one hand and Maternity on the other. The expectant mother should be followed up in the hospital, similarly, the Child Welfare Centre should link up with children's hospitals. The Health Visitor will probably be required to specialise in one particular branch of the service. But, said Professor Moncreiff, these are guesses at the future, but he feels that the Health Visitor will become the liaison officer between the Health Service and the General Practitioner when the new Health Act comes into being.

PHYSICAL FITNESS FOR THE INDIVIDUAL

By Dr. J. D. KERSHAW

WHEN considering physical fitness, one cannot isolate it from mental fitness, for one must interact with the other. When an individual is not mentally fit, for instance, he is very unlikely to be able to carry out the routine required for physical fitness.

But first let us consider what is fitness and what do we wish to keep fit for? The answer, in general terms, to these two questions is that fitness is a state of well-being which we wish to maintain on the highest possible plane in order to keep fit for the life we have to lead. From this we shall see that there is no one condition of fitness but many different conditions. Human beings lead such widely diverse lives that they must aim at widely diverse standards of fitness in order that each individual may reach his own target. The surgeon, whose brain, hand and eye must be kept at one standard of efficiency, is neither more nor less fit than the champion boxer who needs quite a different standard for his particular job, or the dustman, whose standard of muscular energy is different again. We cannot even have one standard for all surgeons or all dustmen, for individual variations must all be taken into account.

A rough definition of physical fitness is the ability to get the best out of your body. In this connection, we have to remember that no two people start with the same body, but, even so, all can be equally fit if the *best* use is made of available material.

The Average Person

The modern tendency to think that "normal" means "average" can lead us very much astray if we are not careful. For there is no such thing

as an average person, and all we can do when trying to discover an optimum figure for anything, such as the height and weight of a person, the number of calories or hours of sleep he requires or any other figure of this nature, is to take the approximate standard to which the greatest number conforms and call this the average and call any higher figure "over the average" and a lower figure "under the average." It is convenient to have such standards, but they are useful only as a very rough guide. For a person to be "near the average" in a particular respect means no more than that he is "probably about normal"; variations of as much as 20 per cent above or below "average" are quite compatible with health and "normality."

How Does Fitness Relate to Health?

One must differentiate to a certain extent. One cannot take handicaps in themselves as a sign of unfitness—the blind, for instance, *can* attain a high standard of fitness, so can post-poliomyelitis cases. Illness also can usually be regarded as a merely temporary departure from the normal. It is even possible, with some types of chronic disease, such as osteo-arthritis or middle-ear trouble, to be fit, although unhealthy if, in spite of the physical drawback, the best possible use is being made of the body.

Essentials of Fitness

1. DIET. Before the war, many people were better fed than they are now though, on the other hand, others were worse fed. The well-to-do did a lot of wasteful eating, partly because so little was known about the relative value of food.

Basic diet needs enough carbohydrate, fat and protein, but what may be enough for an adult may be quite insufficient for a growing child. The vitamin and mineral content of diet is very important. Books on dietetics agree roughly as to basic necessities, but it is important to remember that people differ in their ability to utilise the same foods, so what may be just enough for one may be too little or too much for another.

Never lay down rigid standards of diet; for the only way to judge whether the child is correctly feed is to see if the food is doing its job and keeping the child fit. The reason why more attention needs to be paid to protective foods than to calorie intake is because a diet which satisfies appetite usually contains an ample amount of calories but may be badly lacking in protective foods.

2. CLOTHING. The function of clothing is to keep the body comfortably warm, and we must remember that some children react more quickly to heat and cold than adults. Always dress according to the temperature of the day and not according to the calendar. Clothing is meant to keep heat in, not keep cold out, so, provided the diet is suitable and produces sufficient heat, the golden rule for dress can be comfort—always remembering the importance of ventilation near the skin.

3. SHELTER AND FRESH AIR. There is much superstition and misunderstanding about the dangers of night air. This is no better and no worse than day air, and if for any reason sufficient outdoor exercise cannot be taken in daylight, it can be safely taken after dark. Bedroom windows should be open all night. Classroom ventilation and heating must take

account of humidity, draughts, and the possibility of infection. With the young child, warmth as well as fresh air is essential; the older child tolerates cold somewhat better.

4. PHYSICAL EXERCISE. Indoor exercises are useful as far as they go, but the best exercises of all are games played out of doors, when both body and mind have to work in unison and are kept well exercised. There should be more team games and outdoor exercise in the present school system.

5. SLEEP. Beware of setting fixed standards for sleeping time. Some children appear to get much better "value" for their sleep and therefore do not need so long in bed. Others need more than the average. A sign that a child is getting what sleep he needs is if he wakes quickly and happily. If he wakes slowly and drowsily he has probably been woken too soon. To ensure good sleep, encourage a quiet period *before* going to bed. Moderate reading in bed does no harm if the child is in a good light and a good position. The actual hours of sleep required can best be gauged by the child's behaviour when awake.

6. RECREATION has to be interpreted as the "balancing" of our lives. If work is sedentary and monotonous, active, exciting recreation will help to balance it. If work is exciting and physically tiring, recreation should be restful and unexacting—balance is what should be sought.

Golden Rules of Fitness

Moderation in all things.
Balance between work and play, activity and contemplation.
A purpose in life—the working towards a worthwhile goal.
Planning and adjustment.
So shall we be able to know the answer to the question: Fit for what?

MENTAL FITNESS

By Dr. DORIS ODLUM

A MENTALLY fit person is one who has a well-integrated mental and physical constitution. One, moreover, who has been able to develop his or her personality harmoniously and who is immune from internal conflicts of guilt, fear, insecurity, etc.; and who is able to face up to the external vicissitudes and troubles of life.

Very few people measure up to this standard, but it is a possible goal at which to aim.

How to Produce the Mentally Fit

1. GOOD STOCK is of the first importance. One way for the community to develop good stock is to encourage a high birth rate among socially desirable families. These are not necessarily found only among the rich and well educated. There is plenty of good stock to be found among the working and lower middle classes. Unfortunately, however, these families in the past have not had a very good show, and the best way to help them now is to make it possible for the clever children of the working classes

to obtain the education and social amenities which they need for their full development. The present-day Social Services are making this much easier than was formerly the case. Better economic conditions will make it possible for them to *afford* to have the larger number of children which many of them really desire but cannot at present contemplate.

2. PARENTCRAFT TEACHING. It is only recently that we have begun to realise the importance of the early formative years. Teaching for both fathers and mothers in parentcraft, with special emphasis on a child's mental and physical needs, is therefore of the utmost importance.

3. MARRIAGE GUIDANCE. Successful parentcraft must have its foundation in harmonious family life, therefore some marriage preparation of young couples is a prime necessity if we are to have the right type of homes and the right type of parents on whom the mental fitness of the children will primarily depend.

4. A NEW OUTLOOK. In the past, adults in general, and parents in particular, have taken it for granted that they always knew what children should do, and have endeavoured to impose their ideas on those in their care. This has not led to very good results, and we must in future drop many of the "oughts" and ask ourselves (and teach parents to ask *themselves*) what will happen if this or that course of action is followed and, if no greater harm is likely to result, let the child make his own experiments.

In education, much money is wasted because children are not being offered the type of education they want. All children are eager to learn but if they are wrongly taught they will spend their energies in resisting what the teacher seeks to impose, and will gradually get the idea that *all* learning is objectionable and dull and will therefore stop learning the moment they leave school. Thus we breed rebels and dunces, and shall continue to do so until we reorganise our system.

5. EDUCATION FOR LIVING. Children get very little sex education or help in their adolescent difficulties; neither do they have teaching in social relations and citizenship. As a result it has been said that "large numbers of people never grow up emotionally beyond the age of eleven." Mass psychology confirms that many groups of adults are still about the "gangster" age in their emotional outlook.

If, then, we are to breed and educate a mentally fit race, all these considerations must be borne in mind. For a very large number of people with whom we come into contact are by no means mentally fit or emotionally stable. Let us consider the various types.

NEUROTICS. These people are usually serious-minded, attached to their family, good workers, but tortured with anxiety. As Britons, we are prone to anxiety. It is perhaps a relic of our Puritan ancestry, which is responsible for so much that is good and so much that is bad in our national character. It enhances the feeling of guilt in those who try too hard to do the right thing. These people must be taught to relax, for they could do so much more for the community if only they were relieved of their fears. They are victims of their own over anxiety. The happy-go-lucky, careless and selfish very rarely have a nervous breakdown!

PHYCHOTICS. These are the mentally ill. About 30 per cent of them recover after treatment and are able to go back to their work. After-care is particularly important with these cases and, happily, mental hospitals and local authorities are now appointing psychiatric social workers to help in their rehabilitation.

MENTAL DEFECTIVES. These are people who are suffering from a failure in development of the brain, and they range from the hopeless idiot to the sub-normal. It is the latter who are a danger to the community, for they are free to marry where they wish, and they tend to have large families, many of whom will be mentally sub-normal also. They make bad parents and are shiftless and incompetent as a rule.

THE AGED MENTALLY INFIRM. It has been estimated that by 1970 one-fifth of the population will be over sixty years old, and as our expectation of life continues to increase so will the problem presented by an ageing community. Of the many old-age pensioners in our midst, a certain proportion tend to become senile, and these will need special care in homes or hospitals.

MENTALLY UNSTABLE EPILEPTICS. These can be helped and made to feel much happier and more secure if they have special clubs and workshops where they can both work and play in surroundings in which their particular difficulties are understood.

PSYCHOPATHS, ECCENTRICS AND VAGRANTS. These are all varieties of mentally unstable people who, owing to some inherent weakness often accentuated by unfavourable conditions during childhood, are unsatisfactory members of the community. The foundation of training centres for vagrants is suggested in the New Public Assistance Bill.

1. THE UNSTABLE CHILD IN HOME AND SCHOOL. Child Guidance is now an established method of helping to diagnose and treat cases of child maladjustment.

2. THE CHILD DEPRIVED OF NORMAL HOME LIFE. Such children often show symptoms of emotional instability. Under the Children Act they will have much better social care, and this should help to make them both happier and more stable.

3. THE DELINQUENT CHILD is yet another manifestation of failure to deal with psychological trouble in its early stages, but the Home Office is beginning to take steps to deal more effectively with the needs of these children.

Industrial Health

The Government are at last beginning to be aware of the importance of the human factor in industry, and have set up the Schuster Committee to enquire into the subject. Among other factors, more careful selection of all in authority, such as shop stewards and foremen, with a view to their ability to deal with personnel will certainly have good results; also more careful selection of jobs for school-leavers might well prevent the sense of frustration which leads to absenteeism and bad work.

Finally, I should like to impress on you that Health Visitors can do a great deal to help in building up the mental fitness of the community. For one has to bear in mind that mental fitness or unfitness is influenced so largely by the conditions of home life during childhood and it is with parentcraft and the home that Health Visitors are so closely concerned.

MARITAL FITNESS

By REGINALD PESTELL, Dip.Econ., J.P.

Secretary London Marriage Guidance Council

OUR society is founded on family life. Therefore the breakdown of husband and wife relationships in this country should concern us all. The approach to deal with the problem must be by remedial treatment and by marriage preparation. Prevention by a wider field of education for those contemplating marriage is the true solution

It is most desirable that those contemplating marriage should offer themselves for preparation. Then the relationship can be examined, and, if necessary, adjusted before marriage takes place. At the present time, for every four or five marriages in this country there is one breakdown. Mr. Pestell considered things so serious that he forecast in 1947 there would be forty to fifty thousand applications for divorce in this country; there might even be between sixty to seventy thousand, and these did not include applications for separation in the magistrates' courts or take into account separations by mutual agreement. Therefore, emphasis must be put on prevention by education beforehand.

Our society depends on the family founded and built on sound marriage relationship, just as we depend on the children of one generation for the well-being of the children of the next. The home is the place which influences the coming generation. There the children should get their mental and physical stability. The environment of the home plays a great part in the production of good citizens.

Mr. Pestell then emphasised how "preparation for marriage" was so important, so that young couples entering marriage were fully equipped. The four important points to consider were:

1. THE RIGHT CHOICE OF PARTNER. To be in love is not sufficient; in addition to sex attraction there must be a more enduring factor in every marriage relationship. The tendency to-day is to put too much stress on sex attraction, then, when this physical attraction dies down and finds its proper place in the marriage, couples find there is nothing left and the whole marriage breaks down.

In these days of social and economic difficulties, disharmony is often the result, but the complete breakdown is not entirely due to these factors, but is only one factor which tips the balance in an already unstable relationship. For, indeed, if all the necessary accommodation could be found, it would not put an end to marital disharmony and breakdown. But, said Mr. Pestell at this point, those people who house young couples play an important part, and he would like to get it over to them that they must recognise that these young couples must have a certain basic right to

freedom and independence. Living with in-laws and other relations imposes a great strain on the newly married couples. If these people understood there would be fewer difficulties in the future.

2. The Right Psychological Attitude. Young couples expect more out of marriage than former generations, but this is only possible when they enter marriage better equipped. If couples contemplating marriage realised they had to do things in relation to someone else the difficulties of readjustment would be less, and this is where preparation plays such an important part. Marriage brings with it problems and difficulties which want careful handling, and those who are equipped can steer on a safe course. Serious frustration due to inability to achieve a good sex adjustment imposes a serious strain on marriage. Family planning has come to be widely accepted, whether right or wrong, and social workers must recognise this fact. It is a universal condition which is to be dealt with, whether it is thought to be good or bad.

3. Problems of Parenthood to be Discussed and Resolved before Marriage. The married couple's approach to parenthood is very important. If they hold the same views on this subject the harmony of the marriage is helped. But difference of opinion re children and parenthood is a bad start for a marriage relationship.

4. Possession of Sufficient Knowledge to Enable Couples to Lead a Harmonious Sex Life. Lay consultants and medical consultants can greatly help here, and it is they who can help the couple by accurate pre-marital help.

How much longer the Marriage Council can go on depends on financial help. It is deplorable that Marriage Guidance, which means so much, should depend on voluntary effort, whilst large sums of money are being used to provide divorce and separation facilities.

Society is founded on marriage; thus, family life must be maintained at a level to produce happiness to mankind generally if it is to be an asset and not a responsibility to the community.

SOCIAL FITNESS

By Mrs. Ethel Dukes

SOCIAL fitness means the fitness of individuals for the various roles they are called upon to play in daily life—as workmates, playmates, marriage partners, parents and citizens, etc. Adler, who wrote a book called "Social Interest," emphasises the fact that one important symptom of neurosis is a loss of social interest which causes the patient to turn his thoughts and energies inward instead of outward.

Need for Physical Fitness

In order, however, to be socially fit, one should, if possible, be physically fit. At the present time much is being done by governmental and voluntary agencies to ensure a higher physical standard—with the result that a child's expectation of life is now considerably longer than when we first underwent the Industrial Revolution.

In spite of this, however, there are still many diseases which exact their toll of life and health. Tuberculosis is one of these; venereal disease is another. Before the war the incidence of this disease was decreasing, but during the war and post-war period there has been an alarming increase which is causing health and other authorities considerable anxiety.

V.D. and Social Morality

In the work of the Marriage Guidance Council, with which I have been connected since its inception, the question of V.D. does not figure prominently in the work of reconciliation in broken or unhappy marriages. There are, however, a distressingly large number of cases of young people who indulge in "casual intercourse," which is so often the precursor of the disease. Three cases which only recently came to my knowledge illustrate this point. In the first case a well-educated, nice type of girl had allowed herself to have sexual relations with various men friends and contracted syphylis from one of them. When later on she married and wished to settle down and have a family she was unable to bring her baby to full term, and the medical examination revealed her unhealthy condition. In another case two brothers, identical twins, became attracted to the same girl, and she infected them both. In a third case a girl of only twenty-three years old became attached to a married man of forty-five and developed the disease, which she had the greatest difficulty in concealing from her parents while she underwent a course of treatment. In all these cases the happy married life which is the foundation of social health has been jeopardised for the gratification of a casual desire.

There are many factors to be considered in this question of casual intimacy; but I believe that one of the predisposing causes is the ease with with contraceptives can be obtained and the false sense of security which they give. Used carelessly and under unhygienic conditions, they are useless not only as contraceptives but also as a protection against venereal infection.

During the war, when my work brought me in contact with a certain Children's Home in Bucks, I had evidence that the grounds of the Home were broken into every night by couples seeking a quiet place for sexual intercourse. The Matron had to make a search of the grounds every morning to clear away discarded contraceptives before she could allow the children out to play.

Positive Teaching of Health

There are, of course, other ills besides V.D. There is rheumatism, for example, and the various industrial diseases, but I think that *whatever* the disease we should spend far more time and money in teaching people how to live healthily than in persuading them to be treated when they have already become ill.

Health measures of the future should, and doubtless will, concentrate on prevention rather than cure.

Mental Health

Neither must we concentrate solely on physical health, since mental health is, if anything, of even greater importance. Indeed, although the

battle against physical disease shows many signs of success, the social and economic unrest caused by war and modern civilised conditions seems to be leading to more and more psychological sickness, which threatens to cripple our people as surely as did physical illness in the past.

Ages of Maturity

There is one point which it is very important to remember when we consider the whole question of social health in all its many aspects, mental, moral and physical, and that is the varying ages at which we come to mental, moral and physical maturity. Our intelligence, for instance, comes to full development at about sixteen years of age. We should, of course, acquire a great deal more knowledge and wisdom and should profit from experience after that age. Physical maturity usually comes at about twenty-one years of age, while psychological maturity may never come at all to some people, and may be in many cases a product of very slow growth.

This uneven growth of human beings has had some unfortunate results. For instance, it is because we take so much longer to mature emotionally than intellectually that we have been able to prise open such secrets of nature as atomic power, before we were fit to use the power in the right way, in construction rather than destruction—hence the disgrace of the atomic bomb.

Family Life

Healthy family life is the only possible foundation for a healthy social life. Marriage must be considered in *all* its aspects as the foundation of family life and not only as a matter of sexual intercourse and companionship.

When people come to the Marriage Guidance Centre they often think that all that matters is their sexual relationship; they fail to realise that the breakdown of which they complain may have other and more deep-seated causes. In the education of young people, we have tended of late years to lay too much stress on sex, with the result that many of them have become too sex-conscious. Education for marriage should deal with *all* aspects of the subject, with special stress on the importance of family life. For the more broken marriages there are now the more there will be in the future, since the children of separated parents are much more vulnerable in this respect than those who have the steadying influence of a happy home behind them. Let all our educational hygiene, then, be directed to prevent rather than cure.

But if we are to be successful we must not forget the spiritual needs of the child.

Present-day maternalism is terribly dangerous; it leads to selfishness, graft, and abuse of power. Selfishness will allow a man or girl to break up a happy home just to gratify a passing sexual desire; lack of honesty leads to black-market trading and all its attendant evils.

But good family life cannot be "taught"; it can only be "caught." In other words, a child should experience the happiness of a good home if he is to be a good homemaker (and so a good citizen) himself.

As Tolstoy says of Count Vronsky, who had failed to marry but had persuaded a married woman to be his mistress, "He had no idea of married

life" because his mother, who was a light woman, had sent him away very early to school and college in order to be rid of him.

If we are to have social progress we must give every child the chance to grow up with a good family background. The government may do what they can by providing houses, decent living conditions and social security, but these alone are not enough. Indeed, it has been shown by a very careful survey, that these material benefits, though helpful, are none of them as important as good parents—and particularly a good mother, with real "home making" ability.

I quite realise that the whole question is not one capable of a simple remedy. For how can we arrange that every family should be brought up as healthily and as near to nature as possible, in homes full of sunshine, with a background of mental, physical and moral health in a country which is (and must remain) an industrial nation? Yet that is what we must aim at and that is what this conference of Health Workers is here to consider.

THE CARE OF THE MOTHER

By J. Lyle Cameron, M.D., F.R.C.S., F.A.C.S., F.R.C.O.G.

Senior Gynæcologist and Surgeon, Royal Waterloo Hospital

SPEAKING on the "Care of the Mother," Mr. Lyle Cameron said that the care really began as soon as the mother-to-be was born.

It takes in the whole range of hygiene, but, in this lecture, it will be impossible to deal with all aspects in detail, e.g., when a baby girl is born she may be affected by external infection from the mother; this leads us to ante-natal care and medical attention for the newly born, etc. A word must be said here about the upbringing of the little girl, a duty which fell first and foremost upon the parents and not upon teachers and institutions. It was well to teach the naturalness of life and all bodily functions. Early instruction in sex matters was altogether a good thing, but it should in no way run contrary to primitive modesty, which was a protective instinct and could indeed be a characteristic of considerable charm.

Hygiene

The use of tampons of any description should be barred, for they greatly diminish the chances of conception; they are widely advertised and are a paying concern for the makers. In Sweden and other northern countries they are not allowed to be sold.

There was another point regarding health that was to be considered from a maternal point of view. To-day, under the strain of very unsound economics, women were worried and suffered from anxieties. These anxieties cause internal gland disturbances (just as in the case of mental worry a duodenal ulcer may occur). The sympathetic group of nerves becomes affected; these in turn affect the pituitary gland, which acts on the ovaries; thus it can be seen that the whole cycle may be put out of gear.

It is a very finely adjusted mechanism and if disturbed may greatly derange ovarian function, leading to menstrual disorders.

These menstrual disorders were particularly noticeable during the war, and actually seem to be on the increase since post-war conditions have overwhelmed us; this state of affairs was quite apart from a dreary diet and insufficiencies in food varieties. In the emergency of war one faced up to restrictions, but after the war people became more critical of the reasons for continued restrictions.

Mr. Lyle Cameron said that, from his own experiences as a youth on the prairies and in the backwoods of Canada in the pioneer days, he knew what people could face up to if there was real necessity. When hardships were great and scarcities common, the best in people came to the fore: chivalry, refinement and kindness to one another; and perfect cleanliness, no matter how small and humble the home, were characteristics of these resolute people.

The question might be asked, should an expectant mother go to work, either in factory or other place of employment? It was quite safe, and could be in the best interests of her health, provided that the work did not entail strenuous exertion and that it provided a sufficiency of exercise. Steady exercise daily, and not violent, spasmodic bursts, was very beneficial. Change and variety are good, especially when the patient suffers from sleeplessness. But the expectant mother's home life must not be deranged or invaded by anxieties and, especially, disconcerting duties as a result of her work outside.

Diet

Diet must be adequate; this is very important, and all vitamin foods should be included in ample quantities. Calcium must also be adequately provided, as it plays an important part in preventing anti-partum and post-partum haemorrhage and abortion, and rendering available an adequate supply for the needs of the growing embryo.

Happiness in the home is of extreme importance, as it gives the mother a feeling of well-being and makes her capable of surmounting many difficulties and bearing up under the double burden of expectant motherhood.

* * * *

After the lecture, Mr. Lyle Cameron showed a coloured film of his method of performing Caesarean Section. It showed how he employed the low-segment operation with exclusion of the peritoneal cavity, so that blood and liquor do not gain admittance. To this may be added those new and pricelessly valuable remedies against infection, namely, penicillin and the sulphonamide group, cutting down risk of infection to a minimum. The students found this film so interesting that they asked to have it repeated, and their request was granted.

FOOD AND HEALTH

By Miss ELIZABETH MASON, B.Sc., M.A.

Former Dietitian to the Ministry of Food

CORRECT feeding plays an important part in the creation and maintenance of good health. An extract from the Hot Springs Conference states: "Malnutrition is responsible for widespread impairment of human efficiency and for an enormous amount of ill-health and disease." Miss Mason pointed out that Hippocrates said much the same thing 2,500 years ago. It is interesting to note what he said: "And there are many other ills, different from those of repletion, but no less dreadful, arising from deficiency of food."

The Three Main Essentials of a Good Diet

1. Diet must be adequate from the maintenance and energy production of the body.

2. Diet must provide material for repair and building of the body.

3. Diet must contain certain other essential constituents, known under the common term of vitamins.

1. ENERGY REQUIREMENTS vary according to age, sex and physical work.

In adolescence the requirement is high, as in the case of those doing severe physical work. Appetite is a fairly good guide to calorie needs, and in times of plenty we should choose foods which will provide, in addition to the needed calories, other nutrients as well. A good maxim is, "Choose your calories for the company they keep," e.g., the value of the unrefined cereal against the refined cereals. At the present time those having a high calorie requirement present a problem. The meal, if supplying the necessary calories, is often found to be too bulky, as concentrated energy foods are in short supply. In these cases, it is often necessary to provide a snack half-way between two meals to ensure that the calorie requirement is met. Full use of school meals and canteens should be made to provide calories additional to the rations.

2. BODY-BUILDING AND REPAIR REQUIREMENTS. Building and repairing foods are found in the animal and vegetable proteins. Generally speaking, the animal proteins (with the exception of gelatine) are the more efficient builders, as they contain the ten essential amino-acids in sufficient proportion to satisfy the body's needs; whereas vegetable proteins have some of these essential amino-acids missing. But these vegetable proteins must not be decried, as a combination of animal and vegetable protein, or even a combination of certain vegetable proteins, can possess very good body-building value.

Those who have a high protein requirement are:

(a) The expectant mother; who should herself eat the extra rations provided, and not share them with her husband and family.

(b) The growing child; here we must stress the value of school milk and school feeding centres.

It is a good plan to try to spread the rationed animal protein foods evenly through the week and supplement them with vegetable proteins.

3. THE ESSENTIAL FOOD CONSTITUENTS. For a highly protective diet (i.e., one that provides adequate vitamins) three groups of foods should be stressed:

1. Dairy foods, which provide vitamins A and D (calcium is also provided in the milk and cheese of this group).

2. Unrefined cereals, which provide the vitamin B complex, the less refined the richer in vitamin B. Recent work shows that when selective milling is practised, flour of 85 per cent extraction is probably the most nutritious as far as man is concerned. (This group also provides iron.)

3. Fruit and vegetables provide vitamin C and, in addition, red and green vegetables provide vitamin A in the form of carotene. From a vitamin C standpoint, the best fruits are blackcurrants, raspberries, strawberries, citrous fruits and tomatoes. Rosehips are also rich in vitamin C. Most other fruits are not particularly rich in this vitamin, although certain apples (e.g., Bramley Seedling) contain appreciable amounts. Regarding vegetables, those which provide most vitamin C are the green vegetables, but swedes, turnips and new potatoes are also a good source. Vegetables must be cooked properly, by the conservative method; quick cooking in a little boiling water, with lid on pan.

Vitamin C is adversely affected by heat, oxidation and by the action of ascorbic oxidate (a substance present in the vegetable, the action of which can be killed by putting the vegetables in boiling water).

At the present time it is essential to make full use of the welfare foods to safeguard intake of vitamins A, D and C in the case of expectant mothers and young children. It is much better to take vitamins from natural foods than in chemical form. Probably there are a large number of vitamins still undiscovered, and these are consumed with the known ones when taken in a natural state.

Miss Mason concluded by saying that one should do all in one's power to help the women of this country in their feeding problems. Much has been done to further nutrition education, but it is little in comparison with the work that lies ahead.

FEEDING OF THE NORMAL INFANT

By Dr. MURIEL RADFORD

I SHALL take the period from birth up to eight months, when the child is old enough to have "a cut from the joint and two veg." This period, together with the ante-natal feeding of the foetus by the mother's blood, is vitally important in establishing "Health Triumphant" and the future well-being of the individual.

Methods of Feeding

(a) Breast;
(b) Artificial.

Advantages of Breast Feeding

1. Provides a close *link* between mother and child.

2. Ingredients which go to form milk present in *proportions* suitable for building up the body of the human infant, and the milk is at the correct *temperature.*

3. *Cheap* and *time saving.* No cow's milk, dried milk, bottle, teats, valves, measures, brushes, bowls, thermometer, etc., to buy.

4. Clean. (N.B. Care of breasts after each feed very important; all traces of milk on nipple and sourrounding skin should be removed by careful washing and gentle, thorough drying, using a dabbing movement.)

I am always sorry that in our work we do not have access to the mother and baby at the most critical time for the establishment of breast feeding; i.e., in the first ten to fourteen days. To keep a baby on the breast for the first weeks, month, two weeks, or even one week, is so important; particularly in the case of the delicate baby. The gradual change from the mother's blood, on which the baby feeds in utero, via the colostrum in the transition stage, to breast milk, gives the baby such a good start and should be utilised to the full.

At the moment of birth more things happen to us than at any other time in our lives. We suddenly emerge from a state which never happens again, of having everything done for us, floating about in a comfortable medium at a comfortable temperature. We emerge from this, naked, greasy, and slippery, into a world of varying temperatures and various handlings; lungs, mouth, gastro-intestinal tract, anus, arms and legs, nervous system, and so on, have to function for themselves.

The following table shows roughly the proportions of protein, fat and carbohydrate in human blood, colostrum, and breast milk, and indicates the gradual change which takes place. So that to get a baby on to the breast via the colostrum from the mother's blood is one less shock or surprise.

	Protein %	*Fat* %	*Carbohydrate* %	*Salts* %
Human Blood	6-8	0.2-2 0.6 mean	0.1	—
Colostrum	9.8	2.6	2.9	—
Breast Milk, 4-5 days ...	2.0	2.8	5.4	—
„ 5-6 „ ...	1.6	3.1	6.2	—
„ full ...	1.5	3.5	7.0	0.2

Unnecessary Weaning of the Newly Born

It should always be remembered that the breast milk only *starts* to come in on the third day and may not be fully in for six to seven days or even longer. Until the breast milk is established sips of a half-strength saline or cooled boiled water can be given; a hungry, hard-sucking baby is the best stimulus to the establishment of breast feeding.

Conditions in the Mother Contra-indicating Breast Feeding

1. Hopelessly retracted nipple which cannot be made to function even with care in the ante-natal period.

2. Open tuberculosis.

3. Puerperal insanity.
4. Kidney disease.
5. Heart disease with bad compensation.
6. Rhesus negative mother, until factor disappears from the breast milk, or unless milk expressed and boiled.

Complementary Feeds

Suitable complementary feeds which can be given if the milk is very slow in coming in are:

1. Breast milk expressed from another mother who has too much milk and whose baby is the same age.
2. Equal parts of cow's milk and water.
3. Mixture containing more water than milk, with the addition of a little sugar.
4. Whey prepared from fresh milk. One pint cow's milk yields about fourteen ounces whey, by the addition of rennet. In the whey are the most easily digested protein of cow's milk, the lactalbumin and the lactoglobulin and the sugar. There is no fat, this is entangled in the curd, which consist chiefly of caseinogen, the least digestible protein in cow's milk.
5. Dried whey, if available.
6. Weak, half-cream dried milk.
7. Weak humanised dried milk.

With the present *shortage of nurses* in maternity hospitals, there is not so much time spent in the establishment of breast feeding before mother or baby are discharged, and quite often a baby is on complementary feeding on leaving hospital. After allowing for settling in at home, it is most often possible, with advice and care, to dispense with the complementary feed and to get a mother back to breast feeding entirely, and most women are willing and glad to do so. There should be a rule that no baby is discharged from a maternity home or hospital unless he is on a *rising weight* —certainly he should have regained his birth-weight. A paediatrician really conversant with the establishment of breast feeding should be attached to such institutions, in the same way as an obstetrician. The ideal would be to have a small ward for the establishment of breast feeding in difficult cases, where a mother could stay for the requisite time under the care of the paediatrician and a nursing staff appointed for this purpose only.

A breast-feeding mother should have her own and the baby's rations, and the rest of the family should combine to see that this is done. If test-feeding shows shortage of breast milk, the mother should be encouraged to drink plenty of water, a glassful before the feed and a cupful after and lots in between. This drinking of water helps to promote bowel action.

The best time for the *hot and cold sponging of the breasts* is half-way between two feeds, for ten minutes, the whole breast exposed and sponged. Ideally, it should be done several times in twenty-four hours, but under present conditions once or twice a day is the most we can expect. Gentle kneading and massage of the breasts are helpful after careful drying. Half-way between two feeds because time has to be given to rest the breasts after the previous feed and for the stimulation to act.

Spacing and Regularity of Feeds

Quite a number of babies, especially the breast fed, do very well on four feeds in twenty-four hours; the 10 p.m. feed is dispensed with (though the baby's nappy is changed then, of course). A few, a very few, do without the 6 a.m. retaining the 10 p.m. feed.

It is essential that these *four-feed babies* are weighed weekly, and if the gain is not satisfactory, they should return to five feeds in the twenty-four hours. Quite a number of mothers put their babies on four feeds of their own accord.

If the baby is on five feeds the last feed should not be given before 10 p.m. If the baby wakes at 5 a.m. and will not settle down, there is no reason why it should not be fed then, as long as the next feed is not given until 10 a.m. The three-day feeds must be given regularly at the same time every day, whatever the time of the first and last feeds. Otherwise the mother's own plans become chaotic.

"Regular Irregularity"

The baby should be encouraged to sleep as late as possible. There is no magic about the hours 10, 2 and 6. The hours can be 10, 2.30, 5.30, 6, or 6.30, i.e., a 4½-hour interval, followed by a 3, 3½ or 4-hourly one, so long as this time-table is adhered to; the result being a regular irregularity, so to speak.

The ideal in breast feeding should be an intelligent attempt to correlate the requirements of the infant with the well-being of the mother. The most popular and usually the most successful baby is the one who least upsets the menage of the rest of the household.

Early Difficulties

Some doctors who have the care of the mother ante-natally warn her that when she returns home, or when the midwife leaves, and she resumes her household duties, there may not be quite so much milk in the breasts, and give her the receipe for a complementary feed to tide her over. Here, I think, one needs to know the mother pretty well and to feel that she is a determined breast-feeder, otherwise she may be started on the slippery slope which leads to bottle feeding.

Green Motions

Another change which often takes place when the mother is on her own again is that the baby's motions become green after being the text-book yellow. They may remain so for a month or longer. I regard this as normal, and any medicine given is equivalent to the pernicious old custom of giving castor oil to clear the meconium. Mothers should be reassured that these green motions in the early weeks do not matter, and that the reduction of the number of motions from five to six daily to one daily is also normal.

Constipation

Many mothers use the term constipation very loosely, and each one should be asked what she means by it. There is much variation in the number of stools passed daily. The ideal is one a day in a bottle-fed

baby. But many breast-fed babies have an action on alternate days only, or even at longer intervals; it must be remembered that breast-milk is such a perfectly digested food that a large residue cannot be expected. Other healthy breast-fed babies may have two or three perfectly digested motions daily. But some mothers regard one normal stool daily as "constipation," imagining the frequent motions of the early days as the standard.

Parentcraft

A Health Visitor, with care of the mother in impressionable ante-natal period, should encourage both parents to gain all knowledge possible in care and upbringing of the child before its birth. Making a beautiful layette and "maternal instinct" are not sufficient; the mother should learn how to handle a baby while she still has a lap. All knowledge gained beforehand gives the mother a feeling of confidence when her own child is born, and gives serenity so essential for the establishment of breast feeding. Many well and simply written books are now obtainable. Stevenson's words: " Politics is perhaps the only profession for which no preparation is thought necessary," might well be applied to the most important profession of parenthood.

TEST FEEDING: the quantitative estimation of the amount of breast milk.

The ideal is to test feed over twenty-four hours, i.e., for five feeds if four-hourly, six feeds if three-hourly feeding is in use. In our work we are lucky if we can get two tests in twenty-four hours—the 10 a.m. and 2 p.m., and most often the 2 p.m., which usually yields the smallest quantity of the five feeds: a fact which often alarms the mother.

A test feed should be taken very quietly, and as nearly under home conditions as possible where these are good.

QUIET is essential during feed times. So often when a mother says her baby won't take the breast at home, although she has plenty of milk, one finds on enquiry that relations and neighbours have been standing around offering conflicting advise and distracting the baby. Mother and baby should be absolutely alone, not even the proud father present at feed-time.

Test feeding is useful under the following conditions. 1. To see *how* the mother holds her baby, how adept she is, and to find out if she is more awkward with one side than with the other. A lot of very useful teaching can be done here.

2. To see if this mother knows how to make the baby bring up its "wind" (i.e., swallowed air) properly.

3. Where the baby is getting *too much* milk, to convince mother by actual measurement that this is the cause of baby's crying. In these cases milk often runs away. (On the other hand, leakage may denote flabbiness and a small amount of milk. Treat with cold-sponging massage.)

4. Where *breasts are small.* Mother thinks she has not enough milk, although baby progressing satisfactorily; actually has plenty of milk.

5. *Large pendulous breasts,* mother often fat, baby gaining one to two ounces a week. Mother thinks she has plenty of milk; test feed may yield half to one ounce only, indicating urgent need of complementary feeding.

Test Feeding at Home

It is inadvisable for a mother who has baby scales, unless she has a nurse, to test feed every feed every day. It is usually the over-anxious mother who does it, and she may "test feed" the milk away. Let her test feed for twenty-four hours once or twice weekly, write down the results, and bring them to the Welfare Centre for consultation and advice.

Crying and "Wind"

If more doctors, nurses, Health Visitors and parents knew the causes of crying and the signs and symptoms of "wind," many fewer babies would be taken off the breast, and there would be much less changing from one artificial food to another.

In these cases, the mother tells you she weaned her baby because she hadn't got enough breast milk, or because her milk did not suit the baby, or because the milk was "windy." There is no such thing as "windy" milk, but there is a "windy" way of giving it.

CRYING. It cannot be impressed on a mother too soon that for the first few months crying is the baby's only *method of speech,* and that it does not necessarily mean that her baby is underfed.

Causes of crying after 6 p.m. feed, when the parents should have peace and quiet after the day's work.

One reason is that the mother has to rush round to prepare a meal for the husband when he comes in about 6 p.m., so that the 6 p.m. feed is given in a "rushed" state of mind, so to speak, and time is not taken to bring the wind up properly. Also, the father has been away all day and has not seen the child and will perhaps over-excite him. The father can see his child awake at week-ends and will have plenty of time to enjoy him later on.

SIGNS OF WIND. The following signs are all indicative of wind:

1. *Restlessness.* Baby looks thoroughly uncomfortable, as though he had a prickly vest on.
2. Crying.
3. Vomiting.
4. Colicky pain, drawing up of legs.
5. Sleeping restlessly, face may twitch one-sidedly; one mother may think her child is smiling; another that her child is going to have convulsions. During sleep the whites of the eyes show, and the eyes can be seen to roll, also alarming to the inexperienced mother.
6. Refusing the feed (if wind from previous feed has not been brought up properly), or breaking away several times.
7. Passing flatus per anus.
8. Rolling head from side to side (head has semi-circular bald area round most prominent part of the skull at the back giving tonsured appearance).

It is absolutely essential that "wind" is brought up after each breast feed and after a complementary feed , if given. To do this, if the child has fed from the left breast, he should be raised and folded over his mother's

right arm (baby's chest lying on arm); with her left hand she gently and slowly presses the baby's back from the buttocks upwards to the neck repeatedly until the wind comes up. If preferred, it can be done over the mother's shoulder.

Artificial Feeding

The ideal aimed at in artificial feeding is changing. Previously the teaching has been that the constituents of any artificial food should be present in proportions as near to those in breast milk as possible, i.e., protein 1.5 per cent, fat 3.5 per cent and carbohydrates 7 per cent.

To-day, there is an "excess-protein" school, i.e., protein is given in excess of 1.5 per cent of breast milk. You have only to look at the composition of national dried milk half-cream, where it is 3.8 per cent and national dried milk full cream where it is 3.3 per cent, to see this.

	Protein	*Fat*	*Carbohydrate*	*Salts*
	%	%	%	%
Cow's Milk	3.5	4.0	5.0	0.7
Humanised Dried Milk ...	1.9	3.3	6.5	0.5
Half-Cream N.D.M. ...	3.8	2.1	5.5	0.9
Full-Cream D.M. ...	3.3	3.4	4.7	0.7
Goat's Milk	3.8	4.2	4.6	0.85

Both the more and the less-digestible protein of cow's milk are present, but I gather the idea is that the baby takes the excess from the more-digestible protein and does not "have a go" at the less digestible.

WET COW'S MILK. If wet cow's milk is used, it is essential that every drop is boiled as soon as received into the home, even if already pasteurised.

DRIED MILK. Artificial feeding is much simplified by the provision of national dried milk, half-cream and full-cream, and by the shortage of proprietary brands.

One definite advantage wet milk has over dried milk is that it cannot be over-concentrated. Those of you who have prepared feeds of half-cream or full-cream national dried milk will know that, if the instructions on the packet are followed, no feed comes thicker than cow's milk.

I should like to see only the ounce measure used as a fluid measure and abolish measuring by tablespoons. Mothers *will* use the domestic tablespoon, which in itself measures nearly an ounce instead of half an ounce.

IRON IN DIET. It must be borne in mind that many people, including expectant and nursing mothers, have not had sufficient iron in their diets for many years now. On the leaflet of instructions in the national dried milk packets it says, "Many babies, after two months, require extra iron." As there is no national dried milk with added iron, the babies needing it have to take their extra iron in liquid form, one more thing for the mother to think about.

It must be remembered that there is not so much iron in cow's milk as there is in breast milk, so that the artificially fed child is already at a disadvantage. Some firms add iron to their ordinary dried milks to bring it up to the amount in breast milk, but not to the amount required by an anaemic baby.

When a baby is put on iron the mother must be warned to expect its motions to change to a darker colour—brownish green.

For anaemic babies, some firms supply a humanised dried milk, with added iron, and I find this most useful and transfer babies to it from the plain humanised as soon as possible, after they have been on the latter, say, three to four weeks, making the change gradually, half a measure at a time every few days, until the baby is entirely on the humanised with added iron, then on to a full-cream with added iron.

SUGAR. I find mothers tend to lapse a little in the giving of sugar. Half and full-cream and national dried milks should have sugar added.

FAT. Half-cream national dried milk (fat 2.1 per cent instead of 3.5 per cent) is useful where a baby shows fat intolerance, i.e., putty-coloured motions, greasy and large, sometimes solid, sometimes half or all liquid, with a very unpleasant odour. But where there is no indication of fat intolerance, a baby should be put on a mixture containing the requisite 3.5 per cent as soon as possible.

COD-LIVER OIL AND BOTTLED ORANGE JUICE. Start at one month. C.L.O.: One drop daily to begin with; increase by one drop on alternate days until full amount reached. Give at time of feed.

B.O.J.: One drop in half to one ounce of water; increase by one drop every few days until full amount reached. Give one hour before feed.

Mixed Feeding

The secret of success of this is (a) very small quantities to begin with, never more than half to one teaspoonful of anything new; (b) to increase in small quantities, and (c) to give only one new thing on any one day. In this way, if there is any gastro-intestinal upset, it will be on a small scale only.

There is a variation in the starting-time of mixed feeding; a good average time is *four and a half months.* One teaspoonful of broth, gravy or soup, *given immediately before the 2 p.m. feed* (not as a snack in between), either bone or vegetable broth, or gravy from the family joint or the gravy strained off a stew. Increase by one teaspoon till the baby is having one ounce then on to two ounces.

Five months. Purée of, or sieved, vegetables (green-leaved or carrots), half to one teaspoonful.

Five and a half months. Milk puddings, semolina, junket, custard, milky part of rice pudding. Add stewed or baked apple, or prune pulp and, of course, between *five to six months, hard rusk*, before 10 a.m. and 6 p.m. feeds.

Six months. Egg yolk: one teaspoonful of yolk of a lightly boiled or coddled egg. Gradually increase to whole yolk, then start on white. Mothers need to go slowly with egg: some babies are not very tolerant. Omit 10 a.m. or 6 p.m. breast feed and replace with Groats, Farex, etc.

Six and a half months. Steamed fish; fine-flaked fish preferably, such as plaice, sole or dab. Some babies do not take kindly to fish, but will often eat it if a very little finely grated cheese is scattered on it. Omit 6 p.m. or 10 a.m. breast feed and replace as above.

Six and a half to seven months. Steamed liver.

Seven months. Grated cheese, sweetbread, sheep's brain.

Eight months. Rabbit, chicken, lamb. If a child is late teething, the meat may have to be minced and pounded up like potted meat.

Child gradually weans himself off 2 p.m. breast feed when he has two-course dinner; water can be substituted. Less and less can be given at the 10 p.m. feed until child finds it not worth waking up for. Last breast feed to be replaced is the first feed in the morning; cow's milk and water or dried milk mixture is substituted if child is early waker, otherwise give orange juice.

To Judge Child's Progress

Increase in weight is not the only factor, although one to which mother attaches greatest importance. Whole picture of child must be taken into consideration.

1. General appearance. Face even pink colour, bright eyes, good tempered, firm and well-covered without being fat, skin clear everywhere, including buttocks.

2. Weight. Steady weekly gain four to six ounces. Physique of parents must be borne in mind; large parents, child may gain six to eight ounces weekly; small parents, child may gain steadily four ounces weekly.

3. No vomiting.

4. Motions mustard colour, consistence of ointment, smooth, no white flecks and of the same consistence throughout.

5. Sleeps well and sufficiently day and night.

6. Makes movements, rolls, attempts sitting position and attains it, crawls, teethes, etc., appropriate times.

A child should have his meals with the rest of the family as soon as possible and become a social creature and not odd man out at meal times.

THE CONTENTED BABY

By Professor J. A. HADFIELD, M.A.(Oxon), M.B., Ch.B.(Ed.)

Lecturer in Mental Hygiene at the University of London

TOO many people in this country are at present suffering from nervous disorders. The cause of these breakdowns in adult life can often be traced to some condition during the first five years; therefore it is important that the child should be safeguarded during that period. Health Visitors contact the under-fives in their homes, and may be a great help to the mothers in dealing with difficult conditions and problems.

The basis of contentment is physical well-being, and correct feeding is of paramount importance. Just as in adult life happiness depends greatly on good health, so it does in babies. But it must be remembered that physical well-being is often dependent on emotional well-being, e.g., a person suffering from fear and anxiety may have digestive upset and loss of weight, as the flow of the gastric juices is affected. Should this person be a mother any irritability may affect the child and, in turn, cause digestive upset in the little one.

Essentials on the Psychological Side Necessary for a Contented Baby

1. Freedom through love.
2. Freedom from fear.
3. Freedom of action.
4. Freedom through discipline.

1. MOTHER LOVE. The most important factor and basic need of every child, through which he may enjoy protection and security and in turn learn to love. Neurotic disorders often result from lack of that love and protection. It is a mistake to try to make the child too independent and tough. Protection and security in the early years will develop into self-confidence later. The handicapped child needs more love and protection, and will require longer to regain his independence.

2. FREEDOM FROM FEAR. The two primitive fears are: the fear of falling and fear of noise. Other important ones are the fear of suffocation, which often results from a difficult birth, and that of loneliness and the dark. These fears destroy confidence and must be treated with special protection and reassurance. Similarly, in the case of operations on children, the mother should give special comfort and, where possible, be present when the child goes under and comes out of the anaesthetic—thus counteracting the feeling of resentment which a child often bears to his mother after he has been in hospital.

3. FREEDOM OF ACTION. The atmosphere of protection and security gives a child confidence for freedom of action. At an early age opportunity should be given for movement, activity and playing. Toys, such as balls for kicking, encourage movement, and plasticine for modelling gives great pleasure, as children delight in the action of using their hands. The expression of impulses is necessary to a child's mental health.

4. FREEDOM THROUGH DISCIPLINE. Discipline is necessary, because if a child is free to give vent to all impulses, these impulses will fight against one another and a state of anxiety will occur. What we require is the expression and co-ordination of all our impulses. Discipline is really direction, and when we speak of discipline we do not mean the constant "don'ts," nine-tenths of which are unnecessary, but direction through teaching, e.g., of how to do little domestic tasks which a child loves to do, which gives outlet for its activities, and, at the same time, disciplines it. The only discipline really worth while is self-discipline.

THE STURDY TODDLER

By Mrs. EDNA BALINT

WHAT do we know, and why are we so interested, and why do we spend so much time and money on the child of two to five years? It is only in recent years we have realised that the two to five-year-old has a part to play. We know that mother-love is essential to the infant to set him on the right way, but how far does the toddler depend on this mother-love? Before two he has learnt a great deal about the warmth of

mother-love, he has learnt that the world is safe through this; but now, as he becomes a toddler, he becomes a person in his own right, the consciousness of "me" takes shape. He ceases to be simply a part of the child and mother relationship, and becomes a real person with separate identity and relationship to his mother and, later, to other people, too. Mrs. Balint said she would like to bring to mind the fact that it is only comparatively recently that we have come to treat the child's development scientifically. One is not able to look back on experiences during early toddler years, except only to isolated instances; thus, what has been learnt of the toddler is purely from observation.

It is only possible to have a satisfactory adulthood if childhood has been satisfactory; such conditions as serious illness, bad nutrition, a lack of love, all have their effect.

One cannot isolate psychological and physical well-being; the two are very closely related, but meantime, we are thinking along psychological lines, and are interested in the sturdy toddler, not from physical development, but in mental and character development. In these years, he first realises that other people are like himself: they love and feel like he does. This is a tremendous step; it is the beginning of becoming a social being. But it is not achieved all at once; there is experiment with joys and sorrows, successes and failures, and if you watch a toddler coping with these you may see that his progress swings backwards and forwards.

It is important to study in detail what he does in play. A very large proportion of a child's life is spent in play, the rest in routine of adult making. It is important to realise that freedom of play means real freedom, freedom to experiment, and this is achieved by a security which comes from the controlling bond found in adult contact.

It is also important to give suitable toys, and this does not mean expensive toys; something to push or pull, a ball to kick, dolls to nurse, bricks, etc., and sufficient freedom to use these. A too orderly house is worse from the child's point of view than the disorderly.

It is possible to study at the nursery school what a child needs. At two years old he plays as an individual, despite the number of children in the room. At three he begins to play with and not just beside the other child, he taking one part and the other child another, in the game of pretence. This leads to friction at times, and he gradually learns how to win, give in or compromise; this is an important stage in development. This stage should take place between three and five and, if missed by the "only child," has to be met with on entering school at five. The best place for this development is the family, where there is the good mother to revert to in times of difficulty, but the nursery school makes a good substitute for the family.

Pushing formal knowledge into the child before the age of five is bad, and it is sometimes fathers who are guilty of this; rather teach him to undo his buttons and assist with his dressing and with little domestic jobs. He likes to be thought big, and these tasks give him great satisfaction.

The toddler takes great joy in bodily movement, and loves to run and jump. He likes to be able to chat about things he does not understand or that worry him. Training in table manners, etc., gives him sufficient

restrictions, which he must learn to understand; but unnecessary restrictions and the constant "don'ts" when uncalled for are bad.

It is important to realise that, during the two-to-five period, one can love and hate without lasting effect, e.g., the bitter family quarrels which are completely forgotten and the children play just as happily together as before. Children should be left to quarrel, as they work out their hate and love and also learn control. If this is not worked out in early life, it may present a difficulty in adult life; thus it is seen that we are able to understand the child best through the study of his play.

REMEDIAL EXERCISES FOR CHILDREN

By Mrs. ESTRID DANE

Head of the Neuman-Neurode Training Centre for Active Exercises for Infants and Toddlers

TREATMENT by the Neuman-Neurode Preventive Exercises, said Mrs. Dane, is the missing link in Child Welfare. If every three-month-old baby was given a course of exercises for six months, the chance of its developing knock-knees, flat feet, bow legs, large tummies or poor posture would be prevented.

Certain children, although apparently healthy, are born with poor constitutions. The home environment may be perfect, and the child may have every care and attention possible, but, despite these facts, it develops one or more of the above conditions. Therefore, all babies, healthy or otherwise, attending a Child Welfare Centre should have the opportunity of having exercises by a Neuman-Neurode expert, and no matter what the constitution, the child will develop into a physically perfect specimen.

But, said Mrs. Dane, one may ask why should a normal baby have these exercises? The answer is found by visiting an orthopaedic clinic and seeing how much time is spent on such conditions as knock knees, flat feet and bow legs. It is so much better to prevent than to cure, and it takes so much longer to cure than to prevent.

These Neuman-Neurode experts work in conjunction with the Child Welfare Doctor. The tool is the muscle pull; as long as the muscle pull can be made stronger than the resistance of the bone, the muscle will stretch the bone and keep it in place for ever. No artfiicial support (neither built-up shoes, nor irons, nor plaster) is needed.

Congenital deformities can be prevented and cured at this early age, even quite grave ones such as Scoliosis. Not only are these babies physically perfect specimens, but they are perfectly co-ordinated, and possess an independent, confident, disciplined and happy spirit combined with a strong straight body, and the psychological effect is at least as great as the physical.

The Neuman-Neurode Exercises should be as universal as vaccination, and, if practiced at every Welfare Centre, would prevent much suffering by parents and children, and would save the authorities much money.

After this short lecture, Mrs. Dane gave a practical demonstration of the exercises.

FIRSTLY, a baby of nine weeks was brought in. Attention was paid to every muscle in the body, and the baby seemed to enjoy the treatment immensely.

The next patient was a baby of five and a half months, who had had a large umbilical hernia. During the exercises, the baby wore a rubber belt, but this will be discarded as the abdominal muscles become stronger. Then a normal baby of six months was followed by one of a year, who, like the others, enjoyed the exercises.

It is found that babies having exercises sleep well, eat well and are generally contented, and the effect on children suffering from general debility is extremely good. Four children who had not had the advantages of exercises were brought on to the platform, and the difference in their physique was amazing. It is worth mentioning that during the exercises not one of the tiny patients cried, but seemed full of confidence and appeared to enoy the whole proceedings.

SOME FACTORS PRODUCTIVE OF DELINQUENCY

By Miss BARBARA LOW

Official Lecturer for, and Staff Member of, the Institute for the Scientific Treatment of Delinquency; Member of the British Institute of Psycho-Analysis

DURING the last forty years or so, much research has been carried on, in most countries, in respect of the fundamental make-up and development of the human mind, especially in the sphere of the unconscious —a study pioneered and developed by the genius of Freud, and through his influence by co-workers the world over. As a result we have come to realize that the emotional life plays a part, perhaps the most significant and profound, in shaping the conscious mentality in all its many aspects. In the past, too much stress has been laid on the individual's external environment (though this indeed is of the greatest importance) to the neglect of the many internal factors—factors which can only be brought to light by the use of skilled knowledge and a skilled technique.

The Institute for the Scientific Treatment of Delinquency (generally known as the I.S.T.D.) was founded, therefore, by a group of doctors and psychologists, several of whom were engaged in psycho-analytic practice, and, with the help of some generous-minded supporters, to investigate into the condition (and its causes) of maladjusted persons, many of them cases convicted by the courts for some breach of the law, children, adolescents, and adults are admitted for investigation, and when suitable subjects for treatment (short or long, according to the case) the doctors and lay therapists on the staff, helped by the Social Worker, carry out the work. In order that the question of fees shall not be an obstacle to treatment, patients are asked for payments proportional to their earning capacity or to any other finances they may possess. On application for treatment at the clinic, a physical examination is carried out by a doctor, the Social Worker investigates the patient's family, social and work environment, and the

psychologist diagnoses the psychological condition—then, if suitable, as already said, the individual psychological treatment is begun.

Resulting from these various investigations, much knowledge has been gained, of individual development and of the factors which tend to produce different types of behaviour. We may divide these factors, making a rough division, into two main types, namely, External and Internal Factors.

External Factors

The most important of these are the characters and relationship of the parents to each other, the social standards, relations between parents and children, marked poverty, and physical condition of the individual himself (or herself). The broken home, with one parent missing; the home where there is manifest disharmony between the parents; neglect of the child's welfare materially and morally; the insecure home—all these conditions are predisposing factors to develop unstable personalities in early life, leading to various types of delinquency.

Internal Factors

Though the above factors are of the utmost importance, and ones which can be remedied in various ways, if our social conscience is sufficiently developed, we must realize that equally important are the internal factors requiring much more knowledge and even more humanity than the external ones. By the internal factors we mean the individual's special temperament, and his early developed emotional life, depending greatly on his unconscious fantasy-life. From these deep layers of his personality will emerge all sorts of reactions to his environment which may have little to do with any objective reality and creative of fear, frustration and revenge—wishes, attitudes so general in the delinquent character. Here is one illustration.

A delinquent girl, aged seventeen, constantly in the courts for theft—thefts from her employers, from girls with whom she worked, and from her own mother—through psycho-analytic treatment, it was revealed that she had, from childhood, felt a savage jealousy towards her sister, three years older than herself, the first-born of her parents, always accusing the latter of giving all their love to this sister and denying any to herself. It appeared that there was a small substance of truth, very small indeed owing to the fact that the elder child was gifted in various ways and as a young child attracted more notice and admiration than the younger sister who reacted to the situation by a sullen withdrawal of herself and her own gifts (she was herself quite attractive and intelligent) which created quite a reality situation externally. Her thieving was a way of expressing her wish to obtain love and admiration, and a revengeful desire to "get even" with the sister and parents—the situation was further complicated for her by her admiration of her father. In order to escape the burden of too great guilt she had to abstain from revenge against her father, and throw all her antagonism on to her sister and mother. Later on any women who could be considered as rivals, triumphing over her, in abilities or good looks or success in some sphere, were identified unconsciously with the two original enemies and she transferred her envy and revenge on to these newcomers. It must be realised that in characters which display delinquent tendencies

we usually find strong emotional urges with little power of adaptation and sublimations. Thus they are at the mercy of their primitive urges, leading to insecurity and guilt-feeling. The delinquent type so often appears, outwardly, bold and "brazen-faced," but, beneath this façade, there is exaggerated fear, over-repression, and much self-frustration.

Thus we can realise that unless we are able to recognise and understand the deeper and unconscious workings of the delinquent (often a very incorrect term "delinquent," we constantly must substitute a "distorted" mind in great conflict), we shall not be able to help or change the unfortunate personality who brings trouble, and often tragedy, upon himself and society.

THE SOCIAL AND ANTI-SOCIAL SCHOOL CHILD

By Dr. J. D. W. Pearce

IN the limited time available, I shall discuss only the anti-social child. The main types of delinquent conduct are:

1. Sexual—e.g., juvenile prostitution, promiscuity, corruption by talk, etc.
2. Aggressive acts—e.g., all forms of violence from "lying to defame," and bullying, up to grievous bodily harm and murder.
3. Offences against property—i.e., all forms of stealing, whether from home or from shops, or alone or in gangs; often linked up with the black market.
4. Truancy and vagrancy—i.e., staying away from school or running away from home.

Anti-social conduct is essentially a social reaction on the part of the child to the community in which he lives. To understand why a child behaves as he does, when he does, one must first know a great deal both about him and his world. Moreover, one must remember that boys and girls are not little men and little women, but are *children* with understanding, values and needs, quite different from those of adults.

When one compares large groups of social and anti-social school children, it is found that the incidence of various physical defects is significantly higher in the anti-social group. Common examples of this are old rickets, unhealthy tonsils, carious teeth, and general under-nourishment and retarded physical development. Defects of the special senses, such as hearing, seeing, and talking, are also more frequent. In a few cases the delinquent conduct can be traced directly to a physical condition such as old encephalitis lethargica.

When the anti-social child reaches puberty some temporary deterioration of the higher cerebral controls take place, showing itself by clumsiness, apathy, lethargy, and instability; this is at its worst in the middle of adolescence. The anti-social child is much more commonly infested than others with lice or scabies. By and large, the intelligence of the delinquent child is considerably less than that of the non-delinquent, though, of course, there are many exceptions. Similarly, in educational attainment they are often very retarded.

The child's attitude to any disability is very important. He may regard it in one of three main ways:

1. An asset to be exploited;
2. A liability for which he must actively compensate;
3. A sufficient reason for never trying.

Out of such attitudes anti-social conduct obviously may result.

As a rule, anti-social children do not have much sense of guilt or wrong-doing. This may be due to faulty precept and example within the home or within the district. It is, therefore, not surprising that he sees no reason why he should change.

When one looks at the world in which the anti-social child lives, one finds very often that in the home there are all kinds of distressing, unsatisfying conditions; the broken home is all too common. The district may provide much contact with vice, crime and corruption; there are often far too few facilities for healthy exercise and play. Very often there are difficulties at school, usually over school work, but sometimes in relation with teachers or other children. There are many other social factors leading to delinquency with which all Health Workers will be very familiar.

Usually, the anti-social child has experienced very early in life a strong sense of being unloved and unwanted. Such a feeling may arise from a large variety of causes within the family life, e.g., jealousy of the new baby being a very common one.

In order to guard against the risk of a child developing along anti-social lines, he needs, during the first five years or so of life, an environment which provides him with at least the following three essentials:

1. A feeling of security—of being loved and wanted;
2. A true sense of his own value (neither being always blamed nor unduly praised);
3. Freedom to learn by experience and so gradually acquire a knowledge of life.

To obtain the first and second, he must have a stable home and affectionate parents, while, for the third, he needs a reasonably safe and pleasant place in which he can play with other children.

CARE OF THE AGED

By The Right Hon. Lord Amulree, M.D., F.R.C.P.

IT may seem a curious thing that a topic like the care of old people should now come into prominence; so, to understand it, we must consider some figures.

The expectation of life has increased in men by seventeen years, and in women by twenty years.

In 1900 there were 2½ million aged people. In 1946 there were 6½ million aged people. (By aged one means over sixty years in women and sixty-five years in men.)

Now, besides this increase, there has been a decrease in facilities for taking care of these people. Houses tend to be smaller, there is lack of domestic help, and the necessity for more people to go to work. So it falls on the country to take care of this group of people.

Formerly, the Poor Law Institution was the only solution; these were large, melancholy buildings, where fussy regulations were enforced, and, the worst feature of all, bore the stigma of poor law. But, in fairness to these Institutions, it must be pointed out that these unfortunate people, who needed medical care but were not considered suitable for a general hospital, were assured a home, food and kind attention by nursing staff, and they had the "right of admission."

There were, of course, the Voluntary Homes, some bad, as shown by the Nuffield Report, but many not so bad, where good and kind service was rendered.

The National Assistance Bill encourages authorities to make adequate provision for the care of the aged, but as building during the next twenty years is going to be difficult, it is planned to take over large-type houses and convert them. Some important points to be remembered when planning and running such homes are:

(a) Each person should have a room or cubicle, where some privacy is possible. A good example of this being the Chelsea Pensioners' Hospital, where each man has a cubicle, with bed, chest of drawers, etc. His meals are provided, but he can have a cup of tea when he wishes in his dormitory, and when he wants company he may join the others.

(b) Each person should have some, if not all, of his own furniture.

(c) He should be able to go in and out as he pleases, and have his friends visiting him when he so desires.

(d) His pension, 26s., should be paid to him, then he can pay for his room and meals, 21s., keeping the 5s. as pocket-money. This gives a greater feeling of independence.

(e) The main meals should be served in a communal dining-room, with small tables; this ensures properly cooked meals daily and gives the opportunity of observing whether the old people are well and enjoying their food, without appearing to pry.

(f) When possible in mixed homes, two lounges—one for men—suitable chairs, unpolished floors, double rails on stairs, suitable fittings on baths, and an adequate lighting for reading, etc., should be provided.

(g) A sick bay for minor illnesses, with available medical attention, where people shall only be kept for a day or two is essential.

The ideal thing, when building a housing estate, is to provide homes there for the aged, and not to segregate them. It is much better that they should mix with, and take an interest in, younger people.

Geriatrics—The Study of the Health of the Aged

During the past years the general opinion was that if old people became sick they did not respond to medical attention. During the last fifteen years, however, doctors have found that many of the so-called chronic conditions do respond to treatment.

It is important, when the number of old people is increasing, that these so-called chronic conditions should be cured. Otherwise the number of beds required in hospitals would be colossal.

The B.M.A. Report, one of the most significant documents of recent years, emphasises:

1. The need for proper classification, investigation and treatment of long-term disease, if necessary, in special geriatric unit.

2. This unit shall be an integral part of a general hospital, and no one shall be admitted without a thorough preliminary investigation.

3. It must be realised that when a patient is admitted to this unit he may have to stay for many months, and careful treatment given during that time.

When this is completed, the patient either:

(a) Goes to own home;

(b) Goes to hostel, or

(c) To long-stay annexe, where they receive medical and nursing care until they die.

But it is important to prevent rather than cure disease. Early attention to feet, eyes, teeth, joint troubles and rheumatism in general is important.

CO-EDUCATION IN RELATION TO THE TEACHING OF HEALTH

By Professor J. W. Tibble, M.A., M.Ed.

Department of Education, University College, Leicester

IT is his view, said Professor Tibbles, that every child should have the opportunity of education in a school where co-education is in force, as it is most important from an educational standpoint, and also a necessary part of health education. It is as well to point out here, that a mixed school does not always mean co-education, co-education does not come about by the sharing of a building by boys and girls, though it is unusual to find the head of a mixed school who does not believe in co-education.

It may be helpful to go into a little of the history of our schools to find how they became either segregated or mixed. The original Public Schools were for boys and when it was later decided to give educational facilities to girls, it was easier to build separate schools for them, rather than try to break down prejudices by even suggesting that the girls might share with the boys. Therefore it is from historic reasons that these public schools are now segregated. Rather similarly with elementary schools, but in their case the reason was economic; it was cheaper in a rural area to build one school to house all pupils, but it is seen in larger areas, one school might be built for boys and one for girls, not, however, because it was thought that segregation was an advantage or otherwise. So we find that it was from geographical position or historic reason, and not education principle re co-education that our schools are as they are and that no planning went into their making.

Generally speaking Public and Private Schools are separate, but there are a few " progressive " schools which use co-education. These may be day or boarding, and the pioneer is Bedales in Hampshire, founded over fifty years ago.

Co-education is a principle which makes sex-education, not a simple topic at any time, easier.

In sex education three aspects must be kept in mind:—

1. Information and knowledge.
2. Feelings and emotions.
3. Habits and attitudes.

1. INFORMATION AND KNOWLEDGE. Children are naturally curious especially between the ages of five and eleven. They constantly ask questions on all subjects, and unless they are snubbed, which is very bad, they pick up a great deal of knowledge. Therefore, it is very important that questions relating to sex should be answered sensibly and naturally just like all other questions.

2. FEELINGS AND EMOTIONS. Here again correct information must be given on sexual development, but facts are not sufficient to solve all the problems on the emotional side.

3. HABITS AND ATTITUDES. This is where co-education helps, in the building up of habits and attitudes between people of the same sex or opposite sex, e.g., brother and sister, husband and wife, mother and daughter, father and son.

To build up sound educational principles one must cater for an emotional system which will cover all these points, and this is only found in co-education.

There are problems which arise under these three headings, problems particular to the adolescent, who though no longer a child is not yet an adult. There is a clear place in our society for the child and for the adult, but no clear place for the adolescent. What privileges or responsibilities does he have? That is difficult to answer; he or she, may feel quite grown up, but the parents will not admit the fact, and try to keep them children a little longer. This is a condition that exists mainly in the more civilized world; in the more primitive societies there is often no such problem as the problem of adolescence. In fact it is one of the unsolved problems of civilization, but need not be quite so complicated as we make it.

Through films and cheap novels we give a maximum of stimulus and a minimum of sex education. Victorian prejudices are still with us, but parents must admit and face the facts, and not shelter the child by pretending the problem does not exist; and then suddenly throw the child upon the world, exposing her to the full blast of adult stimulation, unprepared.

Many parents do not realise it is their job, and if they fail in their duty, it falls to the teacher to explain; this is not so easy, as it is an individual problem, and must be treated as such. The subject should be treated with simplicity and without embarrassment, giving the child a basic knowledge before the emotional problems of adolescence come along. This emotional side or awareness makes the child unsure and unsafe, and it is important to help with his or her adjustment to the

other sex. Many adult problems are caused by lack of, or wrong education during adolescence.

The Role of the School

Co-education is an educational principle, and provides for the full development of the child in relation to his present needs, and also his future needs as an adult.

The result of segregation is that, firstly, the child is emotionally retarded, and though he may be intellectually advanced, on reaching the University, he finds that he is unable to work and play together naturally and easily with members of the opposite sex. He finds that he has to catch up socially and emotionally at the same time as preparing for examinations; this causes a very great strain on the individual.

Secondly, the child who leaves school at 14 or 15 is in a different position; he is often thrown straight into the world quite unprepared for tackling the facts of life.

The remedy *must* include co-education. Talks, etc., will not suffice Work and play, and the arranging of social affairs together by girls and boys provide the best practical education; the adjustment is gradual and satisfactory, provided that they have had that basic education.

THE ART OF TEACHING

By Professor J. W. Tibble

THE amount of preparation required by an experienced teacher varies according to the task. At times he may need only to spend a short time in thinking over the topic, recalling what he knows of it, think about the kind of audience he will have, and how the material should be adapted to catch their interest, and meet their needs. He will probably jot down a few notes summarising what he has thought to guide him in the actual presentation. On another occasion the lecture or talk may involve working up new materials, doing a considerable amount of fresh reading or research, and working out pretty fully in written or visual form some parts of the presentation. In either case, if it is to be successful, teaching should embody certain fundamental principles. With the experienced teacher or lecturer these principles may be implicit, not explicit. With a beginner, underlying principles need to be applied explicitly, if the lecture is to be a good one.

Nature of the Teaching Situation

What is the nature of the teaching situation? What is the relationship between lecturer and audience and the subject matter or content of the lecture or lesson? Professor Adamson describes this as a triple relationship. The audience should not be regarded as passive recipients. Listening and understanding is an active process, involving not only interaction between teacher and taught, but between teacher and content and audience. The teacher exists to put the pupil in contact with something new. It is not enough for the teacher to have a sound

knowledge of the subject. There are some people born with gifts which make them good teachers, but this is not common. Most teachers have to learn by trying and failing.

Education means altering people, so the audience should not leave the same as they entered. Even as a result of one lecture the audience should be slightly different. Altering people's daily habits is a diffcult task. Think how to place the subject before the audience. The teacher must think how to make the first attack. He should then try to arrange so that his audience will feel that the changes they make are due largely to themselves.

The Learning Process

Professor Whitehead analyses the learning process as comprising three aspects or phases—romance, precision and application. In any act of learning these three stages are involved, and should be embodied in the act of learning whether limited to one lecture or a whole course.

(a) ROMANCE. This is the phase in which the interest of the audience is aroused. If the audience is already interested or concerned in the topic of the lecture, the direct approach can be used in the introduction. If not, it may be preferable to use an indirect approach, or the appeal of novelty. Visual material is useful. The question or problem approach is good as long as the problem is a genuine one, and the lecture does help to solve it. The use of the anecdote is sometimes abused. There is a danger that the audience may remember the anecdote, but forget the point involved.

(b) PRECISION. The second phase is the one requiring hard work. The teacher must be familiar with the psychological principles which govern remembering and forgetting. If the teacher assumes that the audience will remember everything he tells them, he is doomed to disappointment. He should assume that his audience will forget, within an hour, at least fifty per cent of all it hears, and after that the rate of forgetting proceeds until nothing is left unless the person recalls or revises. The beginner nearly always puts too much into a talk and does not discriminate clearly enough between the essential things to be remembered and those parts of the talk which are intended to lead up to or reinforce or illustrate the essential points. In preparing a talk, we should form the skeleton of the talk. We should make sure, by various means, that these points are fully emphasised and vividly presented. The rest of the talk should support and illustrate them. The same thing must be repeated in a different way several times.

(c) APPLICATION. In the past the stage of precision was emphasised too much. The stage of application is the test of all the teacher has done. The talk should lead outside the lecture to life. In the case of the Health Visitor giving a lecture or talk, she should ask herself if the people are going away to do something different as a result of her talk. For informal teaching, the chairs should be arranged in a circle. Rows of seats and desks tend to make the audience shy.

Use of Visual Aids

Visual Education may be used alone or supplementary to a talk. Visual aids cover a wide range. For example, a sound film is itself the whole or main part of the teaching. Where the visual aid is used only to make a single point or to provide an illustration the blackboard is useful for presenting essential points visually in summary form. Charts range from those designed to make a simple point vivid like a poster to one which is full of detailed information. Isotype symbols are standardised and give an exact and vivid impression. Charts are just as important in informal work as in formal work. In the Middle Ages all knowledge was memorised, as there were no books. Now books dominate education too much. People are being educated constantly by the poster, but poster-education should be used more in the right direction. The average person learns more through his eyes than through his ears. One chart can have enough material for a forty-minute lecture. The whole thing is before the audience all the time, spread out in space. The most useful type of chart for teaching purposes is one which takes five or six essential points, and shows how they are related to each other.

Exhibition pictures are a form of education not requiring much verbal explanation. They consist of a series of pictures and diagrams which is large enough for use with a group, or for individual study. The main disadvantage is the prohibitive cost.

The film strip or slide provides a series of pictures or diagrams in a very portable form. There is a possibility that the Health Visitor of the future may carry this apparatus with her. It may be plugged into an ordinary light socket, and so may be used in any place where electricity is available. The apparatus is relatively inexpensive (about fifteen pounds). The teacher of the future will use this method of teaching as he now uses the blackboard. The Episcope is an apparatus which is relatively cheap. The disadvantage is the loss of light due to the reflection by mirrors instead of direct light. The Epidiascope which is a combination of episcope and lantern is not very portable, and it is expensive.

Films, either sound or silent, can be used effectively. Some good films do exist in the field of health education, but many more are needed. The lecturer may find the silent film more satisfactory, as he can provide his own commentary. The films, as with other visual aids, may be used by itself or supplementary to a talk.

Teacher's Personality, Speech and Manner

It is obvious that in giving a talk or a lecture, the lecturer will be expressing his own personality, or some aspects of it, and it is desirable that he should express as much as is relevant to the teaching situation. He must adapt his normal speech, habits, and needs to the classroom or lecture room, but he should make the adaptation seem as natural and informal as is compatible with the nature of the task. Anything that seems formal, stilted, or artificial will place a barrier between teacher and audience. The lecturer should express effectively his keen interest

in the audience and in teaching them. But feeling sincere and being interested, is one thing, and expressing that sincerity and interest effectively is another. This is where art comes in, because it is an art which needs practice, and cannot be acquired quickly. Speech must be slower than normal conversation, with more stress on the ending of words. Tone should be varied, and the full range of the human voice used. Tempo must be varied for emphasis. The teacher must feel natural, confident and at ease. To enjoy teaching (this is very different from enjoying hearing oneself impress an audience) is the main thing. The teacher must acquire the external form of confidence, this soon leads to a feeling of inner confidence.

The important thing is whether, as a result of what the lecturer has said, the audience is affected, in the way the lecturer intended.

TUBERCULOSIS AND THE BRITISH COMMUNITY

By C. H. C. Toussaint, M.R.C.S., L.R.C.P., D.P.H.

Physician to the Willesden Chest Clinic, Middlesex County Council

THE human is liable to infection by two main types of tubercle bacillus: (a) Human, and (b) Bovine.

The British community suffers far more damage from the human type of infection and my remarks will be restricted to this type of disease.

Three age groups are mainly affected: (1) Infants; (2) Young Adults; (3) Middle Aged.

(1) The Infant is liable to infection both from the middle-aged sufferers and from the young adult sufferer.

Contact Examination, in the case of infantile tuberculosis, should be concentrated on a search for the infecting case, usually an adult in the household.

(2) The Young Adult or adolescent is also liable to infection from a middle aged sufferer or from another adolescent sufferer.

Contact Examination should be concentrated on the supervision of those (adolescents) exposed to risk. There should be repeated radiological control for at least three years following exposure to infection.

(3) The Middle Aged sufferer from Pulmonary Tuberculosis is of supreme importance as the possible infector of the previous two groups. Resistance to the tubercle bacillus (in this group) may be lowered by extraneous factors (e.g., overwork, poverty, malnutrition) and manifest disease may arise in this way, subsequent to an infection acquired in early life. But we know also that phthisis in middle age may even be the direct consequence of a recently acquired primary infection.

The ultimate aim of anti-Tuberculosis measures is therefore the early detection, isolation, treatment and cure of the adult sufferer from Pulmonary Tuberculosis.

In Britain the position as regards adult disease is most unsatisfactory.

The British community—as a result mainly of the casualties incurred in two World Wars—is vitally deficient in industrial man power. But tuberculosis has also played a major part in the depletion of our man-power, and, at the present time, in the age groups 15—50, is responsible for far more deaths than any other disease. This is an *annual* drain from our deficient man power.

The major part of invalidity and mortality from tuberculosis is concentrated in the 15—50 age group, the one group of most economic value to the community.

At the same time, throughout the country 50 per cent of all deaths from Pulmonary Tuberculosis occur within a year of notification, a small percentage of them being unnotified; and the outlook for the individual case (with sputum positive) is grave.

Far too many cases are already in an advanced stage of disease when first seen by the Tuberculosis Officer and owing to the long wait before admission to hospital or sanatorium such cases frequently infect and cause disease in a secondary case, thereby doubling the loss to the community and doubling the heavy cost of treatment and of family maintenance.

The Government hoped to solve this difficult and complex problem by the institution of Mass Radiography.

Miniature Mass Radiography is an excellent technical achievement—but as a factor in the anti-tuberculosis campaign it is failing to detect any but a minimal number of those cases in the 15—50 age group who fall ill suddenly and whose illness—in the absence of early detection and treatment—progresses rapidly to a fatal issue.

Miniature Mass Radiography, as at present practised, is failing because it was introduced, and is being maintained, without any reference to the epidemiology of tuberculosis or to the clinical features of the *disease* (as contrasted with the infection).

Epidemiology

From recent investigations in Scandinavia, and in England by the Prophit Trust, we believe that consequent upon the enormous reduction of tuberculosis in the community since 1850, primary infection now occurs chiefly during puberty and early adult life. It may also occur at later ages.

A large proportion of all cases of progressive pulmonary tuberculosis is caused directly by the primary infection.

Morbidity (Frank disease) following recent primary infection in adolescence is:—

(a) High in those most exposed to infection.

(b) High in the first year following infection and low in succeeding years.

(c) Three times higher than in those, of similar age, who have survived primary infection in earlier life.

(From 1850-1910 the greatest fall in tuberculous mortality was in the young adult age groups. Since the period of the First World War we have witnessed a remarkable cessation in this fall consequent upon the growing proportion of non-reacting (Mantoux negative) adolescents in the population as the years progress. Hence the importance attributed to B.C.G. vaccination.)

This important type of disease—following close upon a recent primary infection in adult years—is being missed by Mass Radiology for the onset is comparatively sudden in a person who may have shown a completely normal X-Ray only two or three months previously.

Clinical Features

The onset of progressive disease is often sudden, in a person who has previously enjoyed good health, and is accompanied by symptoms for which the patient seeks advice. Frequently the mode of onset simulates a feverish cold, or an attack of "influenza." This leads, too often, to a mistaken diagnosis, resulting in large numbers of advanced cases, but, if a full investigation is made at the onset, the true nature of the disease will be revealed.

The solution to the problem of early diagnosis is in the provision of Mass X-Ray facilities for the General Practitioner.

Complete X-Ray facilities should be available for every patient with even the mildest symptoms (such as a feverish cold). Investigation on these lines in Bermondsey and Southwark from 1942-46 showed that out of every 100 patients attending General Practitioners with minor respiratory symptoms, between 3 and 4 were, in reality, suffering from active Pulmonary Tuberculosis.

Such X-Ray facilities are greatly appreciated by practitioners and afford the best means of ensuring early diagnosis. At the same time there is need for better education of the public in the early symptoms of disease, and in the necessity of prompt medical attention, and also for much improved standards of undergraduate and post-graduate medical instruction.

Early diagnosis must be accompanied by **immediate treatment.**

The basis of treatment is prolonged **REST in bed.**

Rest is essential both for body and mind.

Food should be as plentiful as is possible.

The patient must be instructed to limit and finally to **STOP ALL COUGHING.** The cessation of cough will inhibit the spread of disease both within the patient's lungs and in his home.

The present acute shortage of beds has led to the scandalous wait of months before admission to hospital or sanatorium.

The patient with progressive disease *must* be kept in bed at home, and, in suitable cases, it is now possible to obtain excellent results with collapse therapy started at home. In some cases this has resulted in the patient's return to his own work before a sanatorium vacancy has even been offered.

Hopes are now being placed in substances known as anti-biotics (e.g., Streptomycin). It is unfortunate that, in the lay Press, exaggerated statements were made as to the effects of these drugs.

Summary

1. The British community is desperately short of industrial manpower.

2. This shortage is due to the wastage of two World Wars, but Tuberculosis also has contributed greatly.

3. In the industrial age group, 15—50 years, Tuberculosis is *annually* responsible for much greater mortality and morbidity than any other known disease.

4. A large part of this annual loss is due essentially to delay in diagnosis.

5. The present Mass X-Ray campaign is contributing little to the solution of this problem.

6. Success can be achieved only by enlisting the full co-operation of the General Practitioner, to whom complete X-Ray facilities should be readily available.

7. The community should seriously consider whether it can afford this annual loss. Tuberculosis is killing young people, and we have need of young people in this country.

ADOPTION

By Dr. H. GEFFEN, M.D., D.P.H.

Medical Officer of Health, Metropolitan Borough of St. Pancras

DR. GEFFEN said that he did not wish to lecture on Adoption as he had done so, so often in 1947, but he realised the importance of the subject, and had therefore agreed to do so.

The report of the Curtis Committee shocked everyone, but one must be more shocked by reading of the number of children who are ill-treated by their own parents, and who certainly were not as well off as children in institutions.

Adoption is not the solution for all ills, and is certainly not the cure of all illegitimacy problems, as can be seen by studying the psychology of the woman who has had a child or who has adopted a child.

The Laws Relating to Adoption

1. To be adopted one must be under 21 years of age and unmarried.

2. To adopt one must be twenty-five, and twenty-one years older than the person adopted, the reason being, to try to re-establish the mother and child relationship. Exception is made when the child to be adopted is the illegitimate child of one or other of the married couple who are adopting. Then the difference in age can be less than twenty-one years.

3. Both adopting parents must consent to the adoption.

4. Consents from both original parents must be procured.

5. Persons adopting and child being adopted must be resident in England or Wales.

6. No foreigner may adopt an English child, except in very special circumstances, when consent must be given by a specified court, and consul in the country where child is going must look into home circumstances.

THE 1926 ADOPTION ACT made adoption legal; until then, though adoption took place, it was not legal, and a parent could take the child away from its adopted parents whenever she so wished.

It must now be realized that when adoption takes place, total possession goes into the hands of the persons adopting, and they may be prosecuted for neglect, etc.

INHERITANCE. The adopted child loses none of its rights, e.g., to property or title, but gains rights from its adopted parents.

There are Three Methods of Adopting

1. In the magistrates' courts—in camera in children's sessions.

2. In the County Courts—it is less local and therefore more private.

3. In the High Court—when the adoption entails the transfer of large sums of money or other settlements.

All this legislation is to prevent persons or societies from making money out of adoption. The Adoption Association must be voluntary, and it is forbidden to adopt for money. The court must be satisfied that all consents have been obtained, and both parties are British subjects. The parents must understand that they have lost the child for ever.

The great wartime problem was not the illegitimate child of the unmarried mother, but the illegitimate child of the married mother. These children were legally the husband's, and when the mother tried to arrange to have the child adopted, it was necessary to have the husband's consent. But the whole reason of the mother wanting the child to be adopted was to hide its existence from her husband.

The court makes an interim order of not more than two years. A birth certificate is made out and bears the name of the child and name of his adopted parents. The word illegitimate is not used.

The Adoption Regulations (1939) stated that

1. No society can arrange adoption unless it is a charitable one.

2. The society must have personnel who have not been convicted on any charge nor have been in prison.

3. They must keep proper records.

4. They must be open to inspection.

5. They must not advertise.

6. No person must receive fees.

7. Any intervening person must notify the authorities.

8. The children must be visited until nine years of age, or till legally adopted.

The number of children adopted were:—

1927	2,967	1934	4,900	1938	6,198	1939	6,800
1940	7,700	1941	10,400	1945	16,367		

Why was there this terrific jump between 1941-1945?

About this time it is interesting to note that every man and woman had to work, but in respect of women, the order stated that married women with children or with an adopted child were exempt. So no doubt the rise in the figures is linked with this order. At the present time, the new order does not let them out, unless the child was adopted prior to December 18th, 1947.

In conclusion it is important to stress that adoption must only be entered upon for the benefit of the child who is to be adopted. The mother must realise that once adopted the child is lost to her for ever. These points are important and must be thought of when arranging any adoption.

THE BORSTAL SYSTEM OF TO-DAY

By H. G. Reeve, Esq.

Governor, H.M. Borstal Reception Centre, Richmond

MOST of the information regarding institutions, such as Borstal, is obtained from the Press or, unfortunately, from the Music Hall or Stage.

The Borstal service is an important Social Service and is undertaking the post-war aggravation of a pre-war problem. Certain measures have been taken to relieve the strain of the work involved, but, as in other measures, it is grappling with shortages of staff and equipment—but not, as Mr. Reeve humorously put it, from shortage of "raw material."

Borstal is for those between the ages of 16-23 years, who have been convicted of an offence which would carry one month's imprisonment or upwards, or those on probation or who have criminal tendencies or associates. The Court, instead of sentencing the boy, may remand him. During this remand period, important information is procured from the school and the home. From this vital information the Governor produces a report, to which the Court attaches great importance. The Court acting on this information may, instead of sending the boy to prison, send him to Borstal. Usually the term is three years, but he may be released any time after six months, if, by then, it is the opinion of the Institution Board at his Borstal Institution, who act for the Prison Commissioners, that there is a reasonable chance of the boy now leading a normal life. The law provides for this release of the boy any time after six months' detention, although he was sentenced to three years. During what would have been the remainder of his sentence, he is supervised at home, and also for a further year, which in any case, would have been his period of licence, had he stayed his full time in the institution.

THE KEYNOTE OF THE BORSTAL SYSTEM IS TRAINING, NOT PUNISHMENT. In the reception areas over 2,000 boys between the ages of 16-23 years arrive annually. Fifty per cent of these are under 18; 90% have committed house-breaking, an odd case may be for arson and very few for sex troubles. There is no one type, all types are represented. The spiv, the street-corner loafer, and the flashy young gent. They come from the town and the country, from the good homes and from the poor homes. Some are co-operative, some hostile. Some have been previously in approved schools, and some have served sentences.

It is interesting to note that only 1 in 100 are tradesmen. Mostly they come from blind-alley jobs, and many are of sub-average mentality The boy from the good home is in the minority, but his is a difficult case, as the root of delinquency lies deep. Though all are of different types, they exhibit certain similar tendencies:—

1. They are incapable of learning by experience. Probation is looked on as getting away with it, and they are inclined to repeat the offence, but a residential sentence re-acts rather differently.

2. They are incapable of constructive thought or planning ahead.

3. They are incapable of settling in a job, but in fairness, this is usually because the jobs are "blind-ally" jobs, and if anything goes wrong the boy just moves on rather than face up to things.

4. There does not appear to be any religious background; religion, in their opinion, is all right for "nice" people who are a bit soft. They, themselves, see no material benefit. It is late at 16 to 25 years to begin religious instruction, so the Chaplains to such institutions have the hardest job imaginable—still they do make headway.

5. Justice to these boys means a judge with a wig, and loyalty means loyalty to the "gang," so it is very difficult to re-direct this loyalty into the proper channels.

6. The police, to these boys, is a challenge; it is on the police that they exercise their adventurous spirit. When they outwit the police they have achieved something. They do not look to the police for help.

The above outlook and conditions are causes of crime. The boys appear to be dependent on mechanical amusement: pictures, dance halls, dogs, etc. They seem incapable of making their own amusement; but these mechanical amusements cost money, and it is when the money runs out that they turn to shop or house-breaking or burglary.

Here Mr. Reeve asked, "How much, if at all is our Educational System to blame for this dependence on mechanical amusement?"

It must not be overlooked that the broken home is often a predisposing cause of children getting into trouble. Not only in divorce or separation, but also when the father's work keeps him away from home, e.g., the Navy or introduction of a step-parent in the home.

Principles of the Borstal System

1. TRAINING. Good classification and specialised treatment for the development of different types.

2. HOUSING. No two institutions (buildings) are alike; some are large houses, others huts, etc., but the general rule is, whatever the type of building, an attempt is made to get down to the individual, through the "house system."

3. THE HOUSE SYSTEM. This is the corner stone upon which everything rests. The housemaster's job is a difficult one. He has to create an atmosphere of trust which teaches the boys to live as members of a community. The boys live strenuous, healthy lives, and their activities aim at some part of the boy's make-up, to fit him to become absorbed in some particular field.

4. The basis of the system is founded on trust. In every individual there is some good. A chain and ball security system is not compatible with trust, although it would make life easy for those in charge. Therefore there are no locked doors or gates. It is known that this trust will be misused by some, but after all only one in 2,000 attempt to escape.

5. DISCHARGE. On discharge each boy is supervised by the Borstal Association (which is represented in every town) during his licence period. This Association finds work, supplies clothes and helps the boy generally. He is visited in his home, but there is no police supervision. He is only asked to notify the association before changing his address or work. This after-care work is quite as important as his education during detention.

FINALLY, THE RESULTS. Period 1928—38, i.e., excluding war years. Every Borstal boy has his finger-prints taken, so it is possible to give an accurate account of results, as a thorough check has been made. Six out of ten Borstal boys give no further trouble. Of the remaining four, two have perhaps undergone one or two short sentences and then have no further trouble. The remaining two, however, will be found amongst the population of our prisons. They had their chance at Borstal and were the failures. Like in other things, they get the publicity. Mr. Reeve then quoted, "Borstal shall be judged by its host of silent successes and not by its few noisy failures."

THE FUTURE OF THE ADOLESCENT

By C. F. STRONG, M.A., Ph.D.

Borough Education Officer, Tottenham, London

Introductory

THE speaker emphasised that adolescence in its very nature was a thing of movement and change; in fact, that phase of life between childhood and adulthood. It was a stage of the greatest importance and should be regarded from the points of view of the Medical Service, the Ministry of Labour, the Justice of the Peace, and the Teacher and Educational Administrator. But, in order to understand it properly, the question of the future of the adolescent could only be logically discussed in the light of the past and the present.

Past Neglect of the Adolescent

In the field of education there had in the past been two sorts of adolescents; those in the elementary schools and those in the secondary schools, and while some 10 to 15 per cent of the children continued after the statutory school-leaving age to be cloistered in the secondary school, the remaining 85 to 90 per cent were flung into the industrial maelstrom at fourteen. To see this matter in its proper perspective we should make up our minds what we mean by education and to overcome the confusion common in the past, of the terms schooling and education. The main weaknesses of the old system were, first the mass methods of teaching in order to produce literates without a sense of taste and discrimination, and secondly, the lack of training in a sense of the creative use of leisure. The result of the first weakness was the production of literates at fourteen who tended to decline into illiteracy in the later stages of adolescence. The second weakness produced, at best, apathy and boredom, and at worst, delinquency and crime, bad conditions aggravated by synthetic amusements and mechanised diversions.

The history of society, and particularly recent history, proves, if proof were necessary, that progress is not a law of nature and it is the business of an educational system to relate itself to social growth and so ensure that the dynamism of history is progressive.

Spasmodic Reforms Before and During the Second World War

There were attempts between the wars to deal with these evils, but the reforms proposed were only spasmodic. In the industrial field there was considerable growth in the Juvenile Employment Service and in the development of the principles of vocational guidance. In the field of leisure there was the Youth Movement sponsored by the then Board of Education which established a statutory system to supplement the existing voluntary bodies, and in the early days of the war the rise of the Pre-Entry Service Units. In the field of delinquency there was the Children and Young Persons Act of 1933; but before this could be widely implemented war conditions brought a further loosening of social discipline. In the field of education, the first Hadow Report—" The Education of the Adolescent " (1926)—launching the reorganisation of elementary schools with a break at the age of eleven plus. The implementation of these spasmodic reforms, however, was generally rather lukewarm and half-hearted. We stand now in the direst need of a new approach to and a more vital attack on the whole problem.

The Education Act of 1944

The speaker outlined the background of war conditions in which the Act was passed and the main provisions of the Act, particularly as they affected the problem of the adolescent. The Act established three stages of education: Primary, Secondary and Further; and abolished the false distinction between elementary and secondary. It raised the school-leaving age immediately to fifteen, with a promise of ultimately raising

it to sixteen. It foreshadowed the County Colleges. It looked towards the ideal of parity of esteem and of amenity among all schools in the national system of education. In all this it was important to grasp the meaning of the phrase, secondary education for all, not, that is to say, the building of an educational ladder so much as of an educational highway along which the élites required in our modern society might march abreast.

The Outlook

In conclusion the speaker emphasised the physical and spiritual aspects of the required reforms and indicated in broad terms the limitations of planning and the dangers of over-centralisation. He insisted that the medical, social, economic and educational aspects of the problem of the adolescent constitute, in fact, one common problem and urged that all the forces for good in these fields must work together as one vast social service for the benefit of the adolescent. It was, he said, essentially a problem of social health and the secret of success in solving it lay in securing continuity; that is to say, bridging the gap between the end of schooling and the entry on to the responsibilities of full citizenship. The adolescents of to-day, he finally reminded his audience, are the adults of to-morrow, and we must do everything in our power to help them to save the world in the atomic age at whose dawn we now stand.

Owing to the indisposition of Miss Moore White, the lecture on Sub-Fertility was given by Mr. V. D. Green-Armytage

SUB-FERTILITY

By V. B. Green-Armytage, F.R.C.P.

IT takes two to make a baby; so, although it is mostly the female with which this lecture deals, it is necessary to point out that it is important for the male to be properly investigated also. He must be examined physically, attention being paid to his history and his semen analysed. The ordinary general practitioner is unable to do this, so husbands' semen must be examined by an expert.

Sterility is divided into three main groups:—

1. Caused by underdevelopment.
2. Caused by conditions of cervix.
3. Caused by inflammation and blockage of the tubes.

1. Sterility from Underdevelopment. This is the cause of one third of the cases of sterility. Part of the anatomy is underdeveloped, or the glands controlling the reproductive system are underdeveloped. This causes the ovaries to function improperly or the pituitrin and adrenalen glands to act subnormally. Hypo-Plasia is not difficult to recognise and the School Doctor and Nurse and the Matrons of girls' schools and homes should keep a look out for it.

If normal breast and menstrual development is not present by sixteen it is the doctor's or nurse's duty to act. These developments should take place between 13-14, and if delayed may be treated with thyroid, C.L.O. and extra milk in some form. Similarly obesity at this stage can be thus treated. If by 19 years nothing has been done these girls may be unable to conceive.

IF 33 PER CENT OF GIRLS ARE UNDERDEVELOPED WHAT ARE THE CAUSES AND WHAT THE PREVENTION?

(a) It may go back to the mother of the girl, who in her turn was undernourished, and her glands not sufficiently nurtured. The establishment of breast feeding is important to counteract this as the endocrine content of the breast milk is not present in artificial feeding.

(b) Retarded growth from unnecessary illness should be avoided; illness from unhealthy tonsils, carious teeth, measles, scarlet fever, diphtheria, etc. Here Immunisation plays its part.

(c) The forbidding of girls, on beginning to menstruate, the use of tampons in any form. Internal tampons must not be used before marriage as this is a predisposing cause of sterility.

(d) Prevention of overwork for school examinations, etc., in the girl who is underdeveloped.

(e) Finally and most important, no form of contraceptive must be used by those underdeveloped girls or their husbands during the first year of marriage, or they will probably never become a mother. A substance in the healthy semen which may be called X is picked up by the female, causing growth of the Uterus and Tubes, and any sign of underdevelopment will disappear in the first or second year of marriage. The use of contraceptives would prevent this.

2. STERILITY FROM CONDITION OF THE CERVIX. This category are the people whose sterility is due to a condition of the cervix. In an ordinary healthy woman the womb undergoes a cycle every month. In the last few years it has been discovered that the mucus plug at the opening of the cervix is opaque from the fifth to the twelfth day of the cycle. It then becomes crystal clear about fourteenth to fifteenth day and reverts to its opaque condition from the eighteenth to twenty-eighth day. Nature has caused this plug to become crystal clear for one particular purpose, i.e., so that the sperm can get through into the uterus, while the plug is opaque the sperm is repelled. Therefore it is only possible to become pregnant between say the 10th and 18th day, the time of ovulation.

To determine the time of ovulation the temperature must be taken first thing on waking, for two consecutive months from date of cessation of periods. If you find that on the daily chart the temperature is lowest on one or two days towards the middle of the cycle, and then the next day it rises a whole degree or more, it is in that 24 hours between the highest and lowest temperature that ovulation happens and cohabitation should occur. But if the temperature does not go up, an ovulation is

present, a condition where the mucus plug remains opaque. The cause of this may be the use of some form of contraceptive, or the use of tampons, which tends to send organisms up to the top of the vagina, causing endo-cervicitis. That is why chemical contraceptives should not be used, only caps and sheaths. The treatment is simple for those conditions of the cervix and can be done in a consulting room. Cauterization daily for four to six weeks, and attention to general health.

3. STERILITY FROM INFLAMMATION OF THE TUBES. Inflammation causing blockage of the tubes is the third cause of Sterility. It may be due to gonorrhoea, but this is not common, for only in about two per cent does it cause blockage; so do not let that get into the minds of young women you are advising. A much more common cause is tuberculosis of the tubes in the apparently perfectly healthy girl.

Causes of Tubular Occlusion

(a) Spasms—Commonest cause. This spasm is similar to pyloric spasm in the new-born baby. It should be treated with Octyl Nitrite, which is made up in phials, and should be broken and inhaled immediately after intercourse.

(b) Inflammation of the tubes, secondary to inflammation of the cervix or uterus or miscarriage. This is a very serious condition, and may be diagnosed by CO_2 test or by X-Ray. X-Ray is the easiest for the patient and most helpful if future surgery is needed.

In the CO_2 test, the tubes are blown out with CO_2 after which 35 per cent of cases become pregnant. If Iodised Oil be used 43 per cent become pregnant in three months.

The reason for this is that between menstruation and marriage ghosts of cells remain in the tubes and the sperm cannot get through. The blowing of the CO_2 or Oil clears the passage. This may be done in a consulting room and is perfectly painless.

ENDOCRINOLOGY

By RAYMOND GREENE, M.A., D.M., M.R.C.P.

STRICTLY speaking, endocrinology is the study of the ductless glands. These are the glands which discharge their secretions directly into the blood stream and not into the ducts. This at first sight appears somewhat wasteful. If you were designing an animal's body and you wanted to manufacture a particular chemical substance for use in a particular place you would, of course, arrange for a duct from the gland to the place where the chemical was to be used, just as, in fact, saliva is conducted from the parotid glands to the mouth. As this is not done in the case of certain glands of the body, we may assume that there is method in the apparent madness and that the secretions of the ductless glands, which are conducted by the blood stream to every cell in the body, must probably have an action on every cell in the body. Many of these actions are only now becoming known.

Unicellular Organisms

In the nineteenth century, Claude Bernard, the great French Physiologist, described what has been translated as "the constancy of the internal environment." Our remotest ancestors were unicellular organisms, floating in sea water. All the nutriment they needed could be soaked in through the skin surrounding the single cell—a process called osmosis. The waste products of the life of the cell, metabolites, as they are called, could similarly soak out again. So minute was the cell that neither the abstraction from the sea of the necessary nutriment nor the discharge into it of the metabolites, could make any significant difference to the constancy of the surrounding medium, the sea water. The two processes occurred so rapidly that the chemical composition of the fluid within the cell was identical with that of the fluid outside. There was complete constancy of the internal environment. However, in the course of time, our ancestors got bigger and became multicellular so that some of the cells were no longer in direct contact with the surrounding sea. Even so, while the animals remained very small it was possible for the seeping process to go on, even though the chemical substances going in and out of the central cells had to pass through several cell walls on their way.

Increasing Complexity

But when the animals got larger still it was necessary for them to have a more complicated, though still simple, mechanism for distributing nutriment and excreting waste products. As the millennia went on and animals became larger and more complex and even eventually left their marine environment to live in the air, a more and more complicated mechanism became necessary, until finally we arrive at the stage of the human being, whose mechanism is so adjustable that he can live on top of a high mountain or at the bottom of a mine, in the tropics or at the poles and, indeed, in an enormous variety of changing circumstances. The whole of this complicated mechanism is under the control of the nervous system and especially an area in the brain called the hypothalamus, the function of which is the control of the autonomic nervous system and of the endocrine system.

Function of the Endocrine System

The main function of the endocrine system is to keep the body fluids in a constant state. Such is habit that many of these fluids still have approximately the same composition as sea water. The hypothalamus controls the endocrine system partly by its control of the blood vessels to the glands and of nervous fibres to the glands, and partly by way of the anterior and posterior parts of the pituitary gland. The posterior pituitary is concerned with water metabolism, that is to say, with the amount of water which is excreted by the kidneys. It prevents the fluids becoming too concentrated or too dilute. The anterior pituitary has an enormous number of different functions. It controls growth and the sexual cycle and it controls the rate of function of the other ductless glands. For instance it controls the thyroid which is responsible for the

rate of oxidation of foodstuffs in every cell. It controls also the adrenals which regularise the salt metabolism of the body and also have an important effect on sugar metabolism. The pituitary also has a say in the working of the Islets of Langerhans in the pancreas, which secrete insulin and in this way regulate the storage of sugar. The parathyroids are not known definitely to be under the control of the pituitary. Their function is the control of calcium metabolism. They decide how much calcium is to flow out of the bones into the blood stream at any particular moment.

Endocrine Diseases

Endocrine diseases are diseases in which these functions have gone wrong and the constancy of the internal environment is threatened. They are, for the most part, chronic diseases and as such are an important consideration to Health Visitors, who must see to it that treatment is continued, not just for a few days or weeks, as in most diseases, but for years or a lifetime. In present circumstances they are difficult disorders to cope with amongst poor patients because they often have to be treated by extremely expensive glandular extracts, or by diets which are difficult for the poor to follow. Nevertheless it is necessary that these treatments should be continued because while they are continued the patients are able to continue with their ordinary work, whereas if treatment is dropped they revert quickly into a condition of chronic invalidism. The exceptions to this rather grim picture are the disorders which can be cured by surgery. When tumours occur in the ductless glands the tumours often act like extra big and extra active glands and their removal may produce a permanent cure. Sometimes when the pituitary is over-doing one of its functions, the bad effects can be minimised by removing the gland on which it is over-acting. The best known example of this is the removal of an over-acting thyroid. The pituitary in such cases cannot be removed but it is producing its evil effects by way of the thyroid and this has become a common and safe operation.

A Regulating Machine

The conception of the endocrine glands as an all-embracing regulating mechanism has naturally led to a much broader conception of the subject than that which I gave you in my first paragraph. Endocrinology has really become an outlook on general medicine rather than a branch of it. The physician with a knowledge of endocrinology is not content to examine a disordered tissue and put a name to it. He must discover whether the tissue is disordered because of a local disease or because of the over-action or under-action of the gland acting on that tissue. If he finds reason to believe that this is happening, he must decide whether that gland is itself diseased or whether it is over-acting or under-acting because it is being over-stimulated or under-stimulated by the pituitary. There the process has to be repeated. Is the pituitary itself diseased or must one look higher still for some disease in the hypothalamus? If the hypothalamus seems to be disturbed we must look higher still and decide whether the disturbance is due to a local organic disease there or whether an emotional storm within the brain is the real cause of all the trouble.

THE FUTURE TRENDS OF LOCAL GOVERNMENT

By F. L. EDWARDS, O.B.E., M.A. (Oxon)

Barrister-at-Law, Assistant Secretary in the Ministry of Health

MR. EDWARDS said he was going to express his own views and not the views of the Ministry of Health, of which he was an Assistant Secretary. The occasion is opportune to view the trends in Local Government, and it is well to speculate what the changes will make in the years to come.

Public Health is not the only influence in Local Government, but in the past it has played an important part, and in the future will be radically altered with the operation of the new act.

It is beneficial to look backwards as well as forwards, as it is better to gauge the future by the past, and one can get valuable hints by looking back.

It can be shown how thirty years of trial and error were necessary to develop by 1872, Local Authorities suitable to work the environmental health services. Also by looking back it is found how outstanding individuals, e.g., Chadwick, Simon, Broadbent, Margt. MacMillan, Southwood Smith and Octavia Hill had such a great influence on the Service, and in all probability, the course of development in the future will be similarly affected by the influence of individuals, in some unpredictable way.

Margaret MacMillan began her work in Yorkshire, then came to London and opened at Deptford, in 1911, a Nursery School, the first of its kind. Dr. Southwood Smith realised the key to better health was through better housing. His daughter Caroline attacked the problem through education, and her daughter Octavia Hill combined the ideas of her Mother and Grandfather and educated the slum dweller in the use of better housing

1948 is the Centenary of Public Health and it is hoped to stage an exhibition in London, showing Public Health during the past 100 years; 1848 was the eve of great developments in environmental Public Health, 1948 the eve of great developments in Personal Public Health.

Actually Public Health began before 1848. It started in 1831 during the great cholera epidemic. How serious this epidemic was, can be judged by the seriousness of the recent epidemic in Egypt, where modern treatment and drugs were procurable.

Vital statistics play an important part in Public Health work. New legislation comes very slowly and where possible should not use compulsion, as this only causes opposition. It may well take another 30 years to find adequate administration to carry out the new schemes. We are too close to the new set-up to see what modifications will be necessary.

THE NEW SCHEME DEPENDS ON THE FOLLOWING FACTORS :—

1. Hospitals.
2. General Practitioners.
3. Local Health Services.

All will be independent but will overlap, and very close co-operation will be necessary, and all must work in sympathetic understanding if the scheme is to work satisfactorily.

The immediate problems facing Local Government are the problems arising from the transfer of power from District Councils to County Councils.

District Councils have many virtues, they are close to the people and are responsive to the people's opinion. The planning of boundaries is a great problem facing the Local Government Boundary Commission, and their report is due next month.

A notable improvement is in the standards and efficiency of Local Government Officers, and their keenness in their work (this Winter School is an example of this). Great financial changes are proposed by way of equalising grants, which will level up the rates in all parts of the country, etc.

Local Government of the future will not be more independent of central control, but less so. The new age of economic planning may defer some schemes indefinitely, but each person must do his or her best to see the country through.

Concluding Lecture

EDUCATION IN GERMANY

By Mrs. EVA M. HUBBACK

BEFORE dealing with the question of education in Germany I think it would be helpful if I gave you a picture of the present position in the British Zone. In the first place you must understand that wide differences exist between the bombed towns and those which escaped damage; there is also a great difference between town and country. In the latter, food is still reasonably plentiful, but in the former there is great scarcity, and many signs of widespread malnutrition.

Economic Difficulties

There are no foods to buy in the shops, so money has little value, and cigarettes are the only currency (about 3s. 6d. each). In addition to the use of cigarette currency, there is a widespread use of barter. This is particularly so in the black market—which is used by practically everybody. Those who can go out into the countryside, take with them what goods they have, to exchange for food.

Food

When one is hungry one thinks of food all the time, and food is therefore the main pre-occupation and topic of conversation. The official rations provide 1,500 calories per person (we in England have 2,700), but few manage to obtain more than 1,300. With extras obtained from the black market or friends in the country, the average is probably 1,600 —the miners get more than this. The bulk of food is starch; fat is *very* short and meat also short. Some children have a school dinner consisting of a plate of soup, but only a proportion of them manage to get this. It is usually their first meal in the day. Babies up to a year old get one-third of a litre of milk a day and up to three years have three-quarters of a litre. After three years only skimmed milk can be obtained. As a result, under-feeding is rampant and exhaustion makes it difficult either for the teachers to teach or for the children to learn.

Clothing

This varies from fairly good among those members of the population who were not bombed out, to very bad indeed among those who lost all they had through bombing and have been quite unable to renew since the end of the war. Footwear is the great difficulty. Many families share their shoes, which enables one or two members to go out to school or work while others stay at home. Any shoes that we can spare are urgently needed, and should be sent to one of the Relief Societies such as the Friends' Relief Orgnisation, Friends' House, Euston Road, London. About forty per cent of the schoolchildren have no shoes of their own and about forty-four per cent no warm overcoat. Other clothes were also needed, as thirty-seven per cent had no underclothes and twenty per cent no suit or dress.

Housing

Again there are great variations according to whether the town was bombed or not. In Hilvershem, for instance, eighty per cent of the houses were destroyed, and it seems physically impossible that the rubble should ever be cleared away. Furniture cannot be bought, and seventy-five per cent of the children have no bed of their own.

Education and the Children

Bearing in mind the conditions that now prevail, it will be realised that teaching children in Germany to-day is fraught with difficulty. Exhaustion from cold and starvation is experienced not only by the children but by the teachers. In some places only thirty-three per cent of the children have the school dinner—a plate of soup; and this is for most of them the first meal of the day. The average size of a class is seventy-seven, and some are larger even than this. Text-books are almost unobtainable, and few teachers have more than one—often not even that. The teachers have to be non-Nazis and are therefore mainly of the older generation, the average age being fifty-seven.

Yet, in spite of all these tremendous drawbacks, the work does go on and, somehow, instruction is given and at least an outline of education offered to the rising generation in Germany.

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